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EDUCATIONAL SURVEYS AND VOCATIONAL GUIDANCE

INTRODUCTION

Frederick G. Bonser

The reorganization of a school system, large or small, by which the industrial and commercial aspects of life are given adequate provision is not a simple problem. This problem involves many factors, all of which must be taken into account, or disappointment and even serious and costly errors will follow. In the haste to establish schools and courses in the field of the various practical arts, it is to be regretted that many cities have begun the work at great expense without any adequate knowledge of their actual needs and possibilities. No intelligent physician prescribes remedial agencies until he has made a diagnosis of his case. To prescribe for the educational needs of a community one must know those needs. So many elements enter into this complex problem of educational needs that nothing less than a rather comprehensive survey of the entire social situation can provide the necessary information. Such a survey emphasizes the democratic character of the public school system. It reveals the needs of all groups in the social whole. Any system of education neglecting the fundamental needs of any group must be regarded as inadequate and undemocratic.

The plan here offered has been organized and developed by

Mr. Righter in the Practicum in Industrial Education in Teachers College. Because of its simple presentation of a means for making the surveys so much needed in cities and rural communities as a basis for educational reorganization, it is issued with the hope that it may be practically helpful in this field of endeavor.

The need for information upon which to base a choice of vocation is one of the large problems of vocational adjustment. Analyses of aptitudes and provision for courses of study bearing upon the preparation for specific groups of callings are not alone adequate to give the boy or girl who is on the threshold of voluntary or necessary choice the full data for wise selection. A knowledge of the relative opportunities of the several vocations offering an appeal because of aptitude or opportunity for entrance includes much more than that of the merely practical activities in the vocations themselves. Wages, possibilities of advancement, length of working season, risks of life, limb, or health, opportunities for reasonable leisure, and social conditions of the workers are questions upon which the prospective worker should think carefully and intelligently before his selection is made.

Relatively little has so far been done in the schools to organize and provide this material in relationship to the needs of the boys and girls of the upper grades and high school. In his work with boys in the secondary division of the Horace Mann and Speyer schools, Mr. Leonard has found that the keenest interest is taken in these questions, and that the study has a vitalizing influence reaching beyond the work in industrial arts to other subjects of study, and awakening new and important interests in the occupational life of the city and country. Although this work has been developing little more than a year, it seems sufficiently significant in its results and promise to be worthy of record. It is a type of work which in itself constitutes a kind of survey which the students themselves may make of their own community. Its results should be of both personal and social value, for it will not only aid these students in making a more intelligent choice of vocation but will reveal needs and opportunities for their wider service as constructive social forces.

THE EDUCATIONAL SURVEY PREPARATORY TO THE ORGANIZATION OF VOCATIONAL EDUCATION

Leonard Righter

In the present day no group of intelligent business men will invest money in a new proposition without a thorough-going preliminary investigation. It may be true that money is lost every year in get-rich-quick schemes more than enough to carry on the legitimate business of the country, but this only demonstrates the great need of preliminary study. A mining prospect does not become a real property until a mining expert has gone over it and carefully tested its richness with his diamond drill and assays. Water power plants are not built until engineers have determined the character of the land and have considered the future demand for power. Why then should changes and innovations in educational matters be made without first considering all the conditions? A city engages an expert to study its water supply before making changes. Why should it not have an expert educational engineer's report on the matter of intended educational changes?

It is the object of this paper to indicate the nature and methods of making educational surveys with special reference to the introduction of education of an industrial or practical character.

The idea of a survey originated first in connection with warlike operations, when sketches and plans were made of the enemy's country, and information was obtained concerning its resources and strength. As people came to occupy permanent positions on the land or to discover and settle new countries, it was necessary to measure and find out the characteristics of such land. Out of this grew all our modern methods of mechanical and mathematical preparation known as civil engineering.

But the development of a society has meant the preparation and laying of plans along other lines. One of the earliest reports

of a survey of a people is that contained in the Book of Numbers when the multitudes of the Children of Israel were numbered and ordered in companies. Records in Egypt and Persia show that these ancient nations tried to make a record of their people. It was in Rome under Servius Tullius that the plan was started from which our term "census" is derived. In Roman times a record of the people was sought in order that they might the better be classified into groups or divisions. Through succeeding ages nations made records of their people as occasion seemed to require, but it was left to the new government of the United States to establish a regular and systematic census. Formerly the census was simply a numbering of the people, but in modern times it has become quite a comprehensive survey of the life of the people.

Pastors of the various religious denominations make partial surveys as they go about among their people on their periodical visits. Here the difficulty is that the information is confined to the pastor's own parish and too often is not systematically organized for effective use.

Under the impetus of the new practical movement in religion a number of systematic attempts have been made to survey neighborhoods. An example of one of these efforts was the "House-to-House Canvass" recently undertaken by the Sunday School Union in Kalamazoo, Michigan. Kalamazoo, a city of 35,000, was divided into districts, the districts into divisions, and these into subdivisions. Each subdivision was in charge of a worker. All started to work on the same day, and one day saw the task finished so far as gathering the information was concerned. The aim was to get as complete information as possible concerning the religious connections and feelings of the people. The information was arranged in a card catalogue and kept in a central place accessible to all who might be interested.

Recognizing the need of a closer relationship between the church and the people, the Home Mission Board of the Presbyterian Church through its departments of "Social Service" and "Church and Country Life" has already laid out extensive plans for community surveys. These are from the point of view of the church and seek to find out that information which

will help the church to become a more vital and efficient factor in its community. The material in these reports is most helpful and suggestive in organizing survey work and a list of the surveys thus far published is found in the bibliography at the close of this paper.

In the recent "Men and Religion Forward Movement," the teams, as they visited a town, found out as much as they could concerning the social and economic conditions as well as the religious. Such a survey is necessarily hasty and is made by walking about the streets, listening to conversations, and asking questions.

The most far reaching surveys that have been made are the sociological surveys. These seek not only to get at material information about the people, but to find out something of their inner life and thought. Probably the greatest of these surveys was the one made of London, England, by Charles Booth and published in nine volumes under the name, "Life and Labor of the People of London." The information for the report was gathered from the records of the schoolboard visitors. Each visitor has a small section of the city and must keep a record of all the houses and families in his section, reporting the number of rooms used by the family, number and grade of children in school, occupation of parents, and their material condition. The following is an extract from such a book for one house:

12. Green Grocer.—1 room and shop. 2 school children and baby. Place in school—Class C, Sec. 24. (Wife's mother lives with them.)
Bootmaker—1 room. 3 school children. Class B, Sec. 2.
Casual Laborer—1 room. 3 school children. 1 at work. Class B, Sec. 2.

After going over the visitor's reports for a street, Mr. Booth or his clerks walked through the street to acquaint themselves further with conditions. From the information thus obtained the reports were made on the people, first as social classes, and second, according to their occupations. Mr. Booth states his aim as being "to show the manner of life and work of the people."

In America the greatest work yet undertaken is the Pittsburg Survey only recently completed. This was organized on the basis of the three factors—People, Place, Work. In this, one can see the influence of Mr. and Mrs. Sydney Webb and Patrick Geddes of the English sociological school. Instead of making a systematic canvass from house to house as the census enumerator does, this survey was put into the hands of trained specialists each of whom investigated along the lines of his specialty. The survey of the wage-earning population was organized under two heads:

1. People in Civic Relations.
2. People in Industrial Relations.

The whole plan of the survey was outlined on a large chart and was as follows:

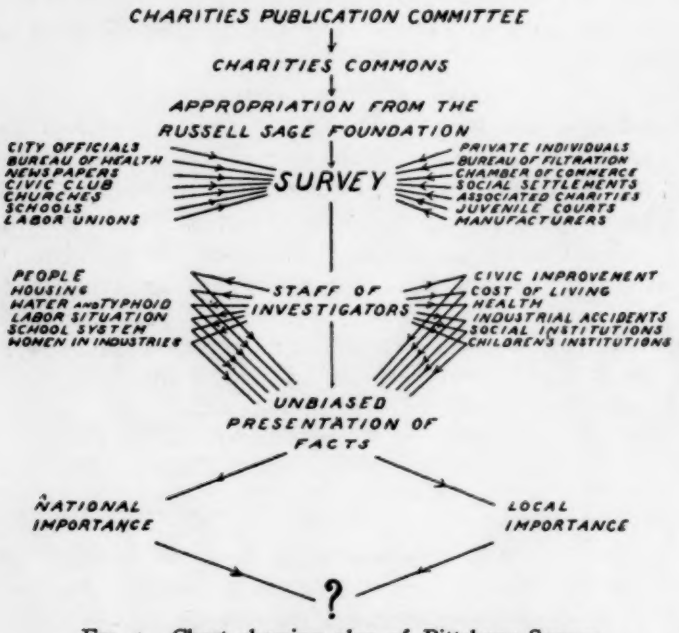


FIG. 1. Chart showing plan of Pittsburg Survey
(Courtesy of the *Survey*)

It is of as much importance to be able to use profitably material that has been gathered, as it is to make the collection.

Museums, libraries, and art galleries are of no use unless people visit them; it is useless to make a census or gather survey material unless it can be made to influence the conduct of the people. To help justify the making of a survey it may be well to state some ways in which survey material may be specifically used.

First, survey material may point out in a community the places that need the most attention and uplift. It can probably be truthfully said that the public school has not made very many efforts to concentrate its machinery on the weak spots of our social life, but of all the social machinery it is the most economic one to use. Through its contact with the children it reaches nearly every home in the community, and for any local reform it becomes particularly effective because of the traditional authority and influence of the teachers. Further, this same authority and influence applied daily during child life produces a marked uplift even in a single generation.

Second, this survey material furnishes the content for the exhibitions and newspapers that stir the public to action in the matter of needed reforms. If this material is written out in a report making a thick volume and bound in a black cloth cover, it will have about the same effect on the public as the material in some old-fashioned museum. It must be live matter put up in a live way. The agents for publicity are not cumbersome books, but newspapers, posters, exhibitions, and pamphlets. Posters are the great means of attracting attention and arousing curiosity. Use them for cartoons and short pithy statements. The comparative-line diagram is an example of such a short statement.

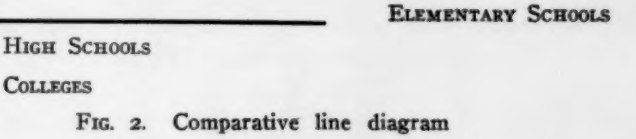


Fig. 2. Comparative line diagram

This diagram shows the relative number of pupils in the different grades of schools in the United States. It is a good type to show a great contrast between two or more quantities.

The sector diagram is often used to show proportional parts of a whole.

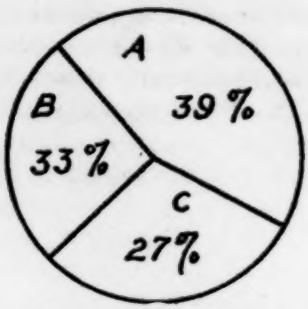


FIG. 3. Sector diagram

(Courtesy of the *Survey*)

This diagram represents a method of showing the relative proportion of natives and foreigners in the population of Pittsburg.[1]

A. Native white of foreign parents. B. Native white of native parents. C. Foreign born.

The placard poster serves well in exhibits and on billboards. Newspapers could use it to advantage also. The following is selected as an example of this kind of poster:

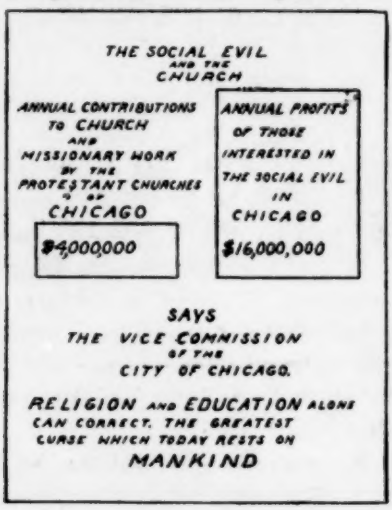

THE SOCIAL EVIL AND THE CHURCH
ANNUAL CONTRIBUTIONS TO CHURCH AND MISSIONARY WORK BY THE PROTESTANT CHURCHES OF CHICAGO
$4,000,000
ANNUAL PROFITS OF THOSE INTERESTED IN THE SOCIAL EVIL IN CHICAGO
$16,000,000
SAYS THE VICE COMMISSION OF THE CITY OF CHICAGO.
RELIGION AND EDUCATION ALONE CAN CORRECT THE GREATEST CURSE WHICH TODAY RESTS ON MANKIND

FIG. 4

(Courtesy of the *Survey*)

[1] See the reports of the Home Mission Survey of the Presbyterian Church for examples of many such diagrams.

While the poster calls loudly to the public, the daily newspaper is the means for constant "pounding." Its short editorials and spicy news items continually keep the attention focused on some phase of the plan on which it is desired to have the public take action. The newspaper tells a little more fully the story hinted at by the poster. If longer articles showing the details of the proposed plan are occasionally used the public then gets a full statement of the case. Under certain circumstances it may be wise to have the longer articles published in pamphlet form, but this in most cases is the most expensive and least effective means of advertising.

If one observes people at public exhibitions, he will note that they are found grouped in greatest numbers about pictures, models, or demonstrations; printed matter may be glanced at but it does not produce the effect secured by the thing that has some "go" about it. The effective exhibit is the one that people talk about when they get home. At a recent "Know Your City" exhibit in Jersey City, large crowds would stand around the demonstrator of the fire alarm and police call systems, the blind workmen caning chairs, the demonstrator of the Babcock test for butter fat in milk, or the school boys with electric motors and steam engines of their own make which would really go. Use every striking mechanical means or demonstration to bring the information to the people. Put in a slot machine that people may work, which will show them at each operation some new statement of their city's welfare. Puzzles and picture cards make excellent means of carrying the information home. A puzzle was recently used to show the necessity of clean milk. It consisted of a card in the form of a milk bottle. It was cut into irregular pieces and each piece had printed on it a characteristic of good milk. Leave any one out and the picture was not complete which implied that pure milk was not obtained. See Fig. 5.

Third, the survey material will indicate the forms of education and training to be emphasized in the community. Now that the public is beginning to talk of industrial education there will come the inevitable scramble to "get on to the band-wagon" of popularity regardless of the real need of the community. Be-

cause a proposition works well in one community, it does not follow that it will work in every other community. Great care must be taken that a seemingly popular project is not foisted upon a community regardless of whether it is really needed.

Assuming that those things that produce a new attitude and changed conduct are educational, and those that produce skill have training value,[1] then our survey may show us that conditions will warrant a pure trade school, evening courses, part-time classes; or, on the other hand, it may show that considerable industrial work should be injected into and replace part of the

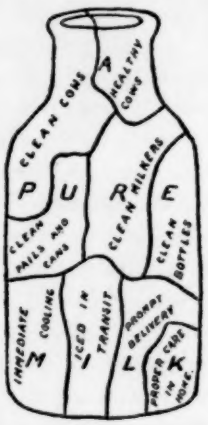


FIG. 5. Milk bottle puzzle
(Courtesy of the *Survey*)

present courses, thus making the segregated trade classes unnecessary.

Fourth, the survey will become the source of material for making the various school courses more vital and bringing them closer in touch with the life of the people. Much is now being said about the inefficiency of our present courses of study. What is the use, it is asked, of taking the children's time to learn the cities and rivers of all the states when they don't know the Hudson and its significance when they stand on its own banks; or why worry about greatest common divisor or how to add

[1] Fundamental Values in Industrial Education. Frederick G. Bonser, pamphlet, Industrial Education, Russell-Bonser, Teachers College, Columbia University, New York City, 1912.

25/365 and 14/91 when they can't make change at the grocery or find the cost of cloth for their dresses? Of course all teachers ought of their own volition to find out these connections for themselves but unfortunately they do not, so the survey material becomes a mine of suggestions on ways of correlating the school subjects with real life.

Fifth, the survey will furnish a basis for Vocational Guidance. A large share of the misfits in life can be laid at the door of ignorance. Young people have taken up the first thing that offered regardless of their ability or fitness. Hence the necessity for direction of boys and girls into right channels as they come to choose vocations. But the committee which does this work must know its own city, the possibilities it has to offer, and the dangers to be avoided. Through its advice concerning poor pay and unsanitary conditions it indirectly becomes a force for correcting such conditions. Through its knowledge of the needs of the community it can prevent the overcrowding of any one industry. It is the basic information for all of this work that the survey may hope to furnish.

In making any investigation there are certain instruments by which the work is carried on. These instruments may be: First, observation—the surveyor simply walks through the community noting those things of interest which he sees. Second, experiment—by which it is hoped to prove or disprove certain assertions when the conditions of the trial are within the control of the investigator. Third, statistics—quantitative values of various neighborhood conditions arranged for comparison and valuation. Fourth, literature in the form of documents, public records, proceedings of clubs, newspaper and magazine files, and census reports are fruitful sources of information concerning the community. These four instruments help us to get at the material condition of a community but, "How can we decipher and record people's ideals and culture, and the images and symbols which habitually occupy their minds?" While some of these inner feelings of community life show in the material life about them yet the inner life of the individual can only be gotten at, and then imperfectly, by a fifth instrument, the interview. This requires the most skill on the part of the

surveyor in the way of tact and judgment; yet at the same time its results are proportionately valuable.

In small communities it will be possible for one person to get the information required, but when the area and population are large others must be asked to assist. The teachers in the public school can get, through the pupils, a great deal of information about the people, their homes, and the community they live in. Where the area is large it may be best to select one, two, or three typical communities within this area. It will generally be found that by the process of elimination one or two typical groups can be found, the results for which will hold true for other parts of the large community. Instead of getting detailed information from all the individuals or families of a given group—say, Germans, machinists, printers—fairly practical results may be obtained by getting information from a selected number of individuals or families. To be sure, the best judgments are based on complete information, but expense is an item to be considered. If the information desired is arranged in question or topic form on cards for each pupil it could very properly be the basis of an interesting language or civics lesson. If the members of the women's clubs can be interested they could obtain information on a special set of topics by each woman's taking a certain small unit of the community to canvass. Truant officers, social workers, and Sunday-school teachers can aid very materially in getting information.

As to method, the survey may be of two kinds—preliminary, and detailed. The preliminary survey would be justified in having for its object, first, the determination of the advisability of modifying some present system; and second, the determination of the general nature of any new features to be introduced. For example, a proposal is made in a community for a vocational school. A checking over of the community in a scientific manner would soon show whether the demand was justified.

The following outline may be suggestive of the chief features to look for in the preliminary survey:

A. The Present Educational System.

1. Organization.
2. Distribution of Centers.
3. Attendance.
4. Pupils Leaving School.

5. Preparation of the Pupils Leaving School for the work they take up.

B. People.
   1. Character of the People about each Center.
   2. Use of Spare Time.

C. Industries.
   1. Number. 2. Kinds.
   3. Skilled and Unskilled Labor.
   4. Wages. 5. Demand for Labor.
   6. Teaching the Beginner in the Industry.

D. Trade Unions.
   1. Number.
   2. Attitude toward Industrial Education.

While much care has been taken to make this outline as widely applicable as possible, yet when applied to a particular locality it must be adapted to local conditions. It may even be found advisable in making a preliminary survey to use much of the outline here given under the detailed survey.

The following schedule of questions is intended to be suggestive of the important things to find out when making a survey preliminary to the introduction of industrial education:

I. The Educational System.
   a. Organization.
      1. How many members compose the Board of Education?
      2. What is the term of office of the superintendent of schools?
      3. How are the duties of administration divided between the superintendent and the Board of Education?
      4. How are the various educational units of the system related to one another? How is each organized?
      5. How is the supervision and authority over teachers divided between superintendent and principals?
   b. Work.
      1. What are the grades and number of each in each building?
      2. How many pupils has each teacher?
         (a) Has the teacher any assistants? Character of their work.
         (b) What training or experience has the teacher had in hand or industrial work?
      3. How many pupils in each grade are on part time?
      4. What per cent of those entering each grade finish the 8th grade?
      5. What per cent of those entering each grade finish the High School?

6. What per cent of those graduating from High School go to College?
7. In how far does the school aid those who do not go to college to succeed in the work they take up?
8. In how far does the school guide toward suitable careers?
9. What use is made of the school building outside of school hours? Evening schools, continuation classes, playgrounds, conferences, lectures, etc.
10. How conveniently are the buildings located for service to the public?

c. Attendance.
1. What is the enrollment of boys and girls in each school?
2. What is the per cent of attendance?
3. What number of times tardy?
4. What is the total number of boys and girls of school age in the district?
5. What is the relation of total enrollment to total of school age in per cent?
6. What is the per cent of those of compulsory school age holding working papers?

d. Leaving school.
1. How many pupils left school in the last year before finishing the 8th grade?
(a) What were their ages? Grade? School record?
(b) What reasons were assigned for leaving?
(c) What was the attitude of the parents?
(d) What was the character of the work secured? The pay? How was the position obtained? How was the new work learned?
(e) Was the position secured the kind wanted?
(f) Attitude of child toward evening school, or part-time classes.
2. How many pupils left the High School in the last year before graduating?

e. Preparation for work.
1. What knowledge supplied by the academic school subjects was needed in the position secured by the person leaving school?
2. To what extent would knowledge of the source and nature of the material worked in be useful if supplied by the school?
3. To what extent would drawing and design be useful?
4. To what extent does the school give instruction in the dominant processes in the production, manufacture, distribution, and use of the important materials of the industry? Of man's most important wants?
5. To what extent does the school give instruction in the arts of home making?

II. The People.
a. What predominant nationalities are to be found in the districts about each school center?
b. What is the order of importance of social classes found in the district?
c. What is the order of importance of the economic classes?
d. How do the people make use of their leisure time?
e. What is the character of the district—residence, tenement, or manufacturing district?

III. Industries.
- a. In what order do the commercial, manufacturing, agricultural, or mining industries predominate?
- b. What are the important manufacturing plants?
  1. Are they controlled by local or outside capital?
  2. What is their product? The chief market?
  3. How many skilled and unskilled men employed? The wages paid?
  4. What is their demand for labor?
  5. To what extent do they give beginners an opportunity to learn a complete trade?
  6. What is their attitude toward boys trained in industrial schools and vocational courses?
  7. What is their attitude toward the part-time system?
     (a) Will they permit employees to attend 1 day per week on work time? One-half day?
- c. What are the different trades or occupations?
  1. How many children and adults employed in each?
  2. What are the health conditions in these occupations?
  3. What is the demand for more workers in these occupations? What is the pay?
  4. What tools must the workman furnish? Their value?
  5. What need is there for the academic training of the schools in these occupations?
     (a) How is any such deficiency supplied?
  6. Can help enough be secured to put in operation the half time system? The 1 day per week plan? ½ day per week?
  7. What part of this occupation can be taught to advantage in a school?
  8. How does a beginner learn to become a skilled worker in this occupation?
  9. What per cent of workmen leave this occupation?
  10. What per cent remain in menial positions at low pay?
  11. What per cent advance? What was the character of their previous training?
  12. How many workmen in this occupation own their own homes?
      (a) What per cent are married?
  13. What per cent of persons in this occupation are unemployed?
  14. When are the dull seasons? How long do they last? What kind of work is then taken up? What opportunity is there for vocational classes in the dull seasons?

IV. How many trades unions are organized?
- a. What is their attitude toward the employer?
- b. What are their most characteristic methods?
- c. What is their attitude toward industrial and vocational education?

If the outline of the preliminary survey is put in the form of a card file it will be much more accessible. For example, the topics under "Educational System" may each be represented by a card as follows: The card on "Organization" may be arranged as a diagram which will show all the relations of the parts to one another. The following is such a diagram as

arranged for Baltimore, Maryland; it is taken from the report of the Commission which investigated the Baltimore school system in 1910. This investigation is fully reported in the bulletin of the U. S. Bureau of Education, No. 4, 1911.

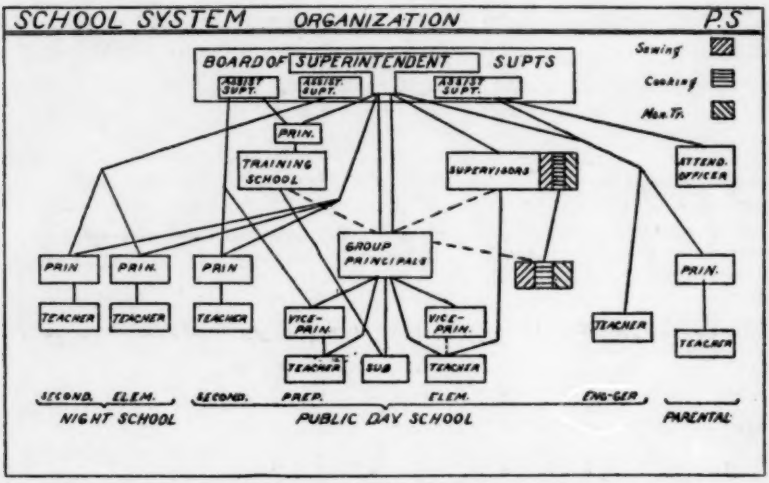


FIG. 6. Diagram of the Educational System in Baltimore, Md.

The card for the "Distribution of centers" should be one of the "standard" maps to be described later, having the boundaries of the school districts marked, and the location of the school buildings together with some symbol which will show the relative size in rooms and seating capacity of each building.

Some of the details of the effectiveness of the schools to serve the public may be arranged as in Figure 7.

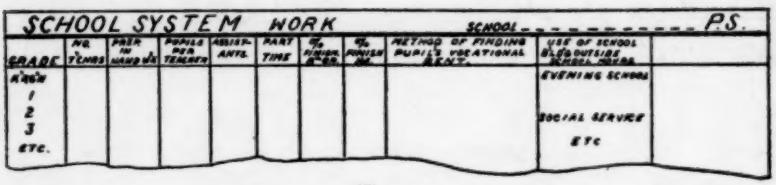


FIG. 7

The card for "Attendance" should be in tabular form, the following being suggestive of the items to be tabulated:

SCHOOL SYSTEM — ATTENDANCE — P.S.

NAME of SCHOOL	PUPILS ENROLLED		PER CENT ATTENDANCE		TIMES TARDY		TOTAL OF SCHOOL AGE		PER CENT IN SCHOOL		REMARKS
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	

FIG. 8

The information concerning "Pupils leaving school" can also be arranged on a card. The data should cover the twelve months preceding the date of the inquiry. Pupils deceased, moving from the city, or transferred to another school are not to be included.

SCHOOL SYSTEM — LEAVING SCHOOL — P.S.

NAME ..... ADDRESS ..... NATIONALITY ..... GUARDIAN .....

LAST SCHOOL ATTENDED ..... HEALTH .....

WORKING PAPERS .....

REASON FOR LEAVING .....

WORK HISTORY ..... SPARE TIME .....

	CHARACTER OF JOBS	FIRM	ADDRESS	HOW OBTAINED	WAGES	HOURS	HOW LEARN	WHY LEFT
WHILE IN SCHOOL								
AFTER LEAVING SCHOOL								

VOCATION DESIRED ..... PARENTS IDEA .....

PRESENT JOB .....

ATTITUDE TOWARD MORE ED. .....

ABILITY TO KEEP CHILD IN SCHOOL .....

FIG. 9

The card showing information on "Pupil's Preparation" may be arranged as follows:

SCHOOL SYSTEM — PREPARATION FOR SUPPORT SCHOOL ..... P.S.

GRADE	NO. PUPILS LEAVING AT AGES					HOURS INSTRUCTION IN PRACTICAL		THEORETICAL		GENERAL		REMARKS
	12	13	14	15	16	ADV.	I.U.	ADV.	I.U.	ADV.	I.U.	
4												
5												
6												
ETC.												

NOTE: ADV. = Preparation for higher grades or school
I.U. = Immediately useful.

FIG. 10

In the outline under the head of "People"—"Character about each center"—the term "Race" refers to and includes both

race and nationality; thus the terms Indian, Negro, English, French, Italian, and American, Whites Born in U. S., might be used.

The classification of Social classes is that given by Professor Giddings in "Principles of Sociology," pp. 126-128, from which the following definitions are taken:

"Social class.—This class is composed of those in whom the consciousness of kind is highly developed and whose dispositions and abilities impel them to make positive contributions to the sum of helpful relations. As ability and willingness to entertain with refinement and charm is the test which polite society applies to men and women who seek recognition and preferment, so ability and willingness to devote life and means to the defence and amelioration of the existing social order is the test of positively social qualities in the larger sense. Harrington has called the Social class the natural aristocracy among men. It is composed of those who keep, lead, and inspire; of the philanthropic and self-sacrificing; of the unselfishly enterprising; of reformers of the sane and patient sort; and of those who voice the common aspiration.

"Non-social Class.—This class is composed of those who cling to narrow individualism. The consciousness of kind in them is normal, but it is only partially developed. They will neither accept favors nor often give them. They ask only to be let alone. This is the primordial social class from which the other three social classes are directly or indirectly generated. It contains in germ all social virtue, all social vice and crime. It is simply neutral, waiting to be reached and impelled upwards or downwards by the resistless currents of social life.

"Pseudo-social class.—This class is composed of congenital and habitual paupers. Their consciousness of kind is degenerate. They simulate the qualities of the social and invariably pose as the victims of misfortune. In reality they have not even the virtues of the non-social, they desire only to live as parasites. Among those whom the law classes as paupers, however, there are some true victims of misfortune, who therefore do not belong to the pseudo-social class.

"Anti-social class.—This class is composed of instinctive and habitual criminals, in whom the consciousness of kind is approaching extinction, and who detest society and all its ways. They make no pretense of social virtues and prefer to live by open aggression upon the social. They do not desire the cooperation of the social in maintaining their rights or interests, and prefer to avenge personally any real or fancied wrongs that they may suffer. Among those who are by law classed as crim-

PEOPLE		CLASSES SPARE TIME			P.S.
		CLASSES			
SCHOOL	RACE	SOCIAL	ECONOMIC	USE of SPARE TIME	REMARKS

FIG. 11

inals there are many who have not become altogether anti-social, and who could be saved from the anti-social class."

For the Economic group the following classes are suggested: the Capitalistic class, people not engaged in active business but living on the income from invested funds; the Mercantile class, people engaged in business for themselves on the lines of buying and selling; the Wage Earner class, people working for others and paid by the day or week; the Professional class, people paid by fees or on a salary paid by the month or quarter; the Casual

INDUSTRIES		PLANTS LABOR						P.S.
		EMPLOYEES						
NAME OF PLANT	PRODUCT	SKILLED			UNSKILLED			REMARKS
		NO.	WAGES	DEMAND	NO.	WAGES	DEMAND	

FIG. 12

Laborer class, those with no definite place of work, depending on odd jobs.

The forms shown in Figs. 11, 12, 13, and 14 may be used for information about "People," "Industries," and "Trade Unions":

Having made a preliminary survey and secured the information as above indicated, what are some of the facts which it may point out? In the first place, if the present system is all right we may expect to find a high school-efficiency, that is, the school serving all persons to the extent that such persons have need of its services. Part only of the points in the above outline

can be used to indicate low efficiency. The others help to show a reason for it or a possible way out. For example, attendance, pupils leaving school, preparation of pupils for support, and use of spare time are some of the points on which efficiency may be based. If tardiness or truancy is prevalent, it may point not

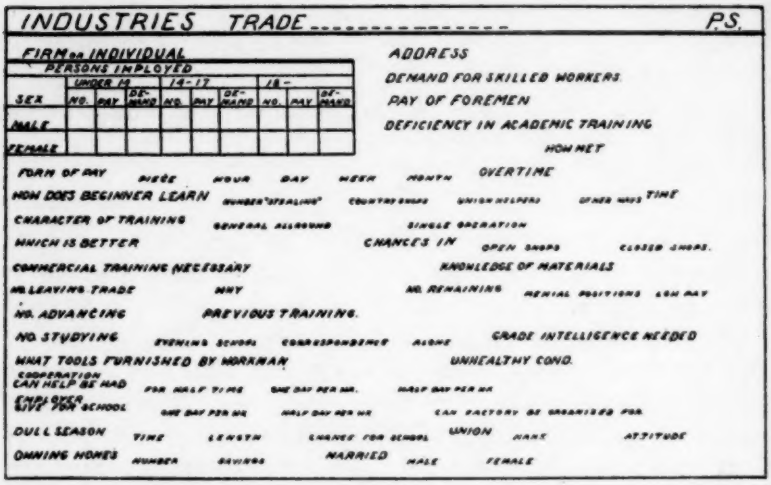


FIG. 13. A separate card is to be made out for each trade or occupation in which people are found employed

only to a defect in organization but also to some social or religious custom of the people. Large numbers leaving school early may point to need of self-support, lack of interesting school work, or tempting opportunities to earn money. Many boys

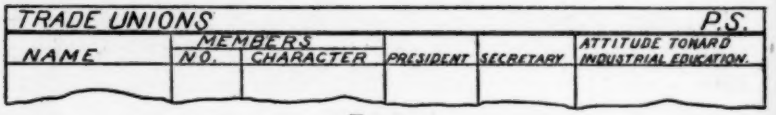


FIG. 14

loafing around saloons or girls running the streets may show that a school playground or a school social center is needed.

It is probably impossible to state the efficiency in terms of per cents as is done with a machine, because the many elements entering have no commensurable basis. A statement of efficiency must be given in approximate terms, as low, medium, or high.

As an example, one may note the attitude of the school in preparing for self-support. Granting that for a pupil to be well adjusted to any life situation there should be in his instruction a pretty even balancing of the practical, theoretical, and general, a preponderance of instruction in any one of these shows a one-sided education and a remedy must be applied. Thus in the table above, Figure 10, if the great majority of the hours of instruction fall in the columns of the theoretical and general it would be safe to say that little is done directly to make a person self-supporting.

The term "practical" is here taken to mean the instruction that has a direct use in showing how to perform the various operations of daily life together with an acquaintance with the materials of that performance. By "theoretical" is meant the instruction that helps to explain, give reasons for, or lay a scientific foundation for the practical operations. "General" instruction is the means by which one's own individual world is broadened and made conformable to the social life. The "practical" may be illustrated by food studies and cooking, studies of building materials and carpentry. Studies in physics, chemistry, geography, grammar, and mathematics may represent the "theoretical," and history, literature, and art may be examples of the "general." It must be remembered that a classification of any of these subjects depends on the point of view; thus, chemistry may be "practical" for one person but "theoretical" for another; art may be "practical" for one but "general" for some one else.

The preliminary survey, then, may be used to point out the important points on which the attention must be fixed. It may indicate that the present curriculum must be revised, or that a school for special training in hand work is needed, or that a playground must be placed at a certain point. If it is found that special training in hand work must be established, the information would show whether it should be in the form of night school work, which would be indicated by a large number of adult day workers asking for further help; or continuation classes, indicated by many employed boys and girls between fourteen and sixteen years of age; or special vocational classes, as shown by

the tendency to leave school without adequate preparation for any kind of work.

In a recent paper read before the National Society for the Promotion of Industrial Education, Supt. H. B. Wilson of Decatur, Illinois, gives the following as among those tests which may be applied to find whether certain industrial instruction is worthy of public support:

1. There should be no training for that part of the trade best learned directly in the practice of the trade.

2. No support for training in dangerous occupations.

3. Public support for technical content—mathematics, drawing, and science—which the industry does not give.

4. Public support for training in practice and experience that the industry does not give.

Because the schools are so intimately related to most of the phases in the life of the community, the detailed survey to be of greatest value must take, to a large degree, the character of a sociological survey. While the preliminary survey is useful in pointing out the general directions along which work ought to proceed, the detailed survey may furnish the information for working out the details of the suggested plan and the method of making such a plant of vital use to the community.

To obtain the proper information, it is necessary to prepare outlines suggestive of the most essential features of the community life. This may be in the form of word headings or a question blank. Unless those obtaining the information are especially skilled, the question blank will probably give the best results. Examples of the organization of such questions have been given in connection with the preliminary outline. While answering the set questions the investigator should always be on the lookout for special or extraordinary conditions relative to the topic in hand and record them as special notes.

As has already been mentioned, the most convenient form for this information is a card file. To begin, the surveyor should choose some standard size of card. The 5″ by 8″ card is suggested as being the best size for the various tabular forms needed. This is also a convenient size on which to draw small outline maps for recording certain kinds of information. A map having

four times the area of the card may have one corner pasted to the card, then by folding and by the use of clips be made to conform to the card file. A number of such standard outline maps should be printed and ready for use as the survey proceeds. Another printed form of card will be useful, that is, the graph card. A standard form is to have the lines drawn one millimeter apart each way. By this plan the information is always in its proper place as the work proceeds and if care is taken the original data can go directly on the filing cards and the work of copying is saved.

The following outline is intended to be suggestive of the topics on which information may be obtained. In its main outlines it follows a fivefold division—People, Place, Work, Finance, and Education. While the outline seems most applicable to city communities, still the same fundamental divisions will apply in any community with some variation in the details.

Outline of Detailed Survey

A. People.

a. Number.
   1. By ward and district.
   2. Density.

b. Nationalities.
   1. Number.
   2. Distribution.
   3. Density.
   4. Wealth.
   5. Standards of living.
   6. Health.
   7. Leaders.
   8. Societies.

c. Social or class groups.
   1. Distribution.
   2. Density.
   3. Wealth.
   4. Health.

d. Economic groups.

e. Health and sanitation.

f. Use of spare time.
   1. Libraries.
   2. Lecture courses.
   3. Theatres.
   4. Pool rooms.

g. Religious and conventional attitudes.

The information indicated by the headings under "People" may be conveniently arranged on cards. The title of the first card would be "Number." Details of the card may be arranged as follows:

PEOPLE	NUMBER		D.S.
WARD.	POPULATION	SCHOOL DISTRICT	POPULATION

FIG. 15

The next card may be a standard map on which the density is marked by means of dots, each dot standing for a certain number of people, as 100 or 500, depending on the size of the map and the density of the population. The same card can be used to show how regions of density have changed by marking dots of a previous period with an ink of different color. Separate maps may also be made.

Under the head of "Nationalities," four different forms of cards may be used. They will show tables, maps, graphs and distribution curves. The form for the table is here shown:

PEOPLE	NATIONALITIES					D.S.
KIND	NUMBER	WEALTH				REMARKS
		BANK DEPOSITS	PER CENT OWNING HOMES	AVERAGE RENT	% RECEIVING PUBLIC AID	

FIG. 16

The geographical distribution may be easily shown on one of the standard maps by using colored areas for each nationality, or may be combined with "density" by using the unit dots colored for each nationality. The variation in the items of this table may be shown by graphs. If the different items are represented by inks of different colors or by character of line they may all go on one card. The following is a supposed case intended only to show the method of using the graph:

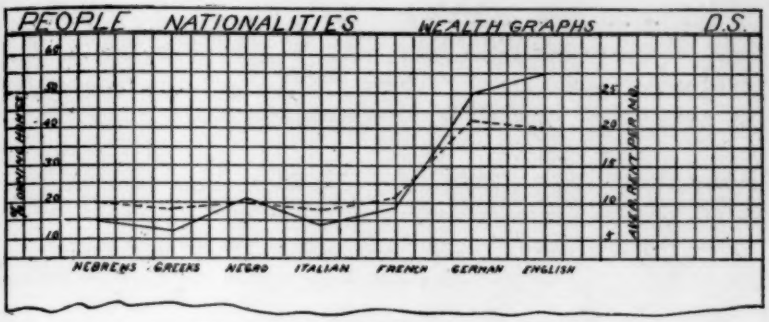


FIG. 17. Two graphs on same card

Bank deposits, those owning homes, and the rent scale might be shown on cards in such a way that the distribution in each group is evident. Take the Germans, for example: A distribution curve may be drawn on the basis of the valuation of their homes. A standard graph card is used for this and the following is a supposed case showing how it may be done:

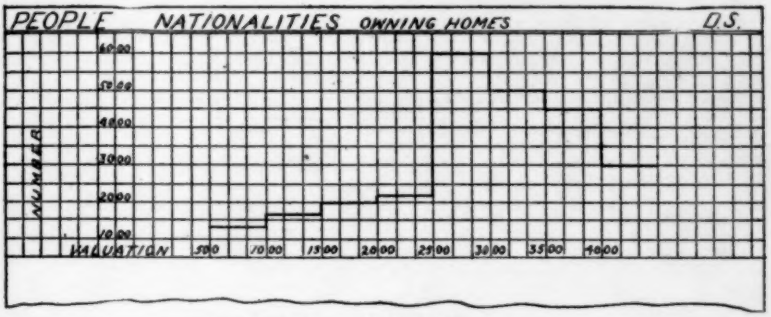


FIG. 18. Distribution curve

The items under "standards of living" are not easy to get but if all the children who come to school can be induced to tell the facts about their own homes a fairly representative result will be obtained. For this purpose special cards may be printed and given to every teacher in the city. The teacher should fill out a card for every family represented in his room. The school card may be as follows:

PEOPLE	STANDARD of LIVING				SCHOOL CARD			D.S.
		NO. FAMILIES	ROOMS		NO. IN	FOOD		
FAMILY	NATION	IN HOUSE	OCCUPIED	RENT	FAMILY	BREAKFAST	DINNER	SUPPER

FIG. 19

From the information on these cards a summary card may be made, of which the following is a suggestion:

PEOPLE	NATIONALITIES	STANDARD of LIVING			D.S.
NATIONALITY	% IN SEPARATE HOMES	AV. NO. FAMILIES PER HOUSE	AV. NO. ROOMS PER FAMILY	AV. SIZE OF FAMILY	FOOD STAPLES.

FIG. 20

If desired, graph, and distribution-curve cards may also be made for various items in these tables. A card showing the market price of the food staples should accompany this group.

In connection with "health," a card having a comparative line-diagram should be made which will show the health conditions as contrasted with other cities of the same class. The items for health, leaders, and societies may be arranged as follows:

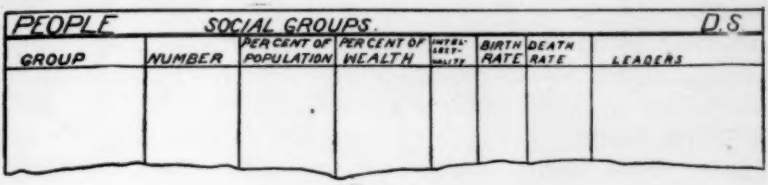
PEOPLE	NATIONALITIES	HEALTH					D.S.
	DEATH RATE	MOST FATAL	DRS. CALLS	DEFORMED		IDIOTIC	
NATIONALITY	PER 1000	DISEASE	LAST YR.	ACCIDENT	CONGENITAL	INSANE	REMARKS

PEOPLE	NATIONALITIES	SOCIETIES and LEADERS			D.S.
NATIONALITY	SOCIETIES	PRESIDENT	OCCUPATION	OTHER LEADERS	REMARKS

FIGS. 21 and 22

It may not seem that social or class grouping have much to do with a school system, yet too often social distinctions and class feeling are carried directly into the school room. Probably the less said about such conditions the better, yet a knowledge of real conditions makes possible a more accurate adjustment. Moreover, there is a tendency to establish one class of schools for those who work with their hands—vocational—and another kind of school for "head" workers. Will this separation of pupils lead to a further separation of social classes? The items under "social or class groups" are suggested with

the hope that their consideration will help to keep the public school the greatest democratizing agency of the American people. The division into classes is the same as mentioned and defined under "Preliminary Survey." The items may be arranged on a card as follows:


PEOPLE — SOCIAL GROUPS — D.S.

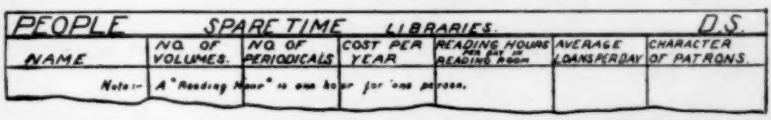
GROUP	NUMBER	PER CENT OF POPULATION	PER CENT OF WEALTH	INTELLIGENCE	BIRTH RATE	DEATH RATE	LEADERS

FIG. 23

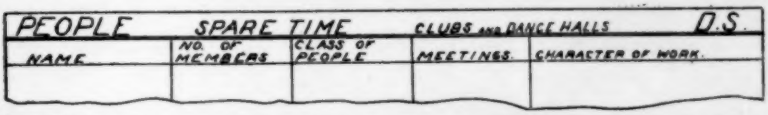
The distribution and density of the social groups may be shown on a standard map with colored dots.

A card for "economic groups," as defined under "Preliminary Survey," may be made out in the same manner as the one on social groups.

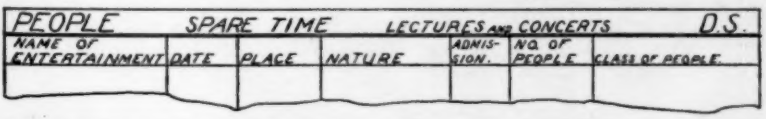
The spare time that man has at his disposal is either the complement or the destroyer of his educational work period; it either "makes him or breaks him." It is our business, then, to see whether the school and the community are taking care to train for a right use of this very important one-third of men's lives. The following forms may be used for this purpose:


PEOPLE — SPARE TIME — LIBRARIES — D.S.

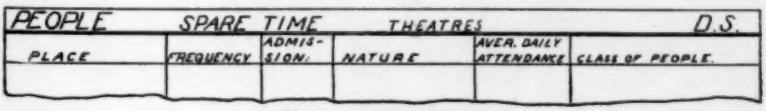
NAME	NO. OF VOLUMES.	NO. OF PERIODICALS	COST PER YEAR	READING HOURS PER DAY OF READING ROOM	AVERAGE LOANS PER DAY	CHARACTER OF PATRONS
Note:- A "Reading Hour" is one hour for one person.						


PEOPLE — SPARE TIME — CLUBS and DANCE HALLS — D.S.

NAME	NO. OF MEMBERS	CLASS OF PEOPLE	MEETINGS	CHARACTER OF WORK


PEOPLE — SPARE TIME — LECTURES and CONCERTS — D.S.

NAME OF ENTERTAINMENT	DATE	PLACE	NATURE	ADMISSION.	NO. OF PEOPLE	CLASS OF PEOPLE


PEOPLE — SPARE TIME — THEATRES — D.S.

PLACE	FREQUENCY	ADMISSION.	NATURE	AVER. DAILY ATTENDANCE	CLASS OF PEOPLE

FIGS. 24, 25, 26, 27

A card similar to the one for theatres might be made out for athletics. Saloons, poolrooms, and billiard halls may be shown on standard maps. If the totals paid for alcoholic beverages, and as fees in the poolrooms, together with the patronage, be obtained, some interesting problems in arithmetic may be made and some fine problems in economics be worked out.

If one knows the conventional attitudes in vogue in a community or any marked or curious customs, it is easier to carry out a line of work affecting the people as a whole. In fact, it is this attention to people's peculiarities that distinguishes the tactful administrator. These customs are most apt to be found in connection with the religious or patriotic observances of the people. For this reason, "religions" and "customs" are tabulated together.

PEOPLE — RELIGIONS							D.S.
NAME OF SECT	NUMBER	PASTOR or LEADER	CLASS OF PEOPLE	CHARACTER OF COMMUNITY SERVICE	SS. ENROLLMENT	CHURCH BUDGET	CUSTOMS.

FIG. 28

It is essential to know something of sanitary conditions. Health depends on these and they may be one of the causes of the poor efficiency in the educational department. Open vaults, garbage piles, etc., may be shown on standard maps while the line diagram may show conditions as compared with other cities.

PEOPLE — SANITATION							D.S.
WARD or DISTRICT	OPEN VAULTS	PUMPS	STAGNANT PONDS	CONDITION OF GARBAGE	CONDITION OF STREETS	DUST FLIES	REMARKS.

FIG. 29

B. INDUSTRIES AND OCCUPATIONS.

a. Kinds.
b. Distribution.
c. Qualifications to enter.
d. Persons employed.
   1. Number. Sex. Age.
   2. Character—skilled, unskilled, professional.
   3. Hours.
   4. Distance from home.
   5. Lunches.
   6. Attitude toward industrial education.
   7. Number attending special schools.

e. Capital invested.
   1. Dividends.
   2. Output.
   3. Markets.
   4. Taxes.

f. Ownership and management.
   1. Stockholders.
   2. Attitude toward industrial education.
   3. Social and cooperative plans. Pensions.

g. Relation to Health.
   1. Safety devices.
   2. Sanitary arrangements.
   3. Medical attendance.

h. Labor Unions.
   1. Connection with industries.
   2. Number and kinds.
   3. Attitude toward industrial education.

C. Community Environment.

a. Location.
b. Means of transportation.
c. Cultivated Country.
   1. Agriculture—extent, products.
   2. Dairy, fruit, fibers.
   3. Roads.
   4. Clubs, granges.
   5. Scientific methods.

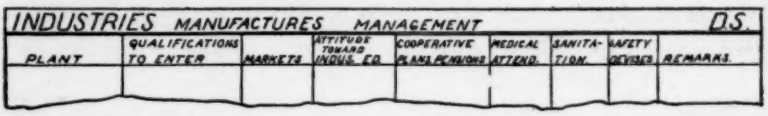
d. Mining.
e. Forestry.
f. Idle and vacant land.

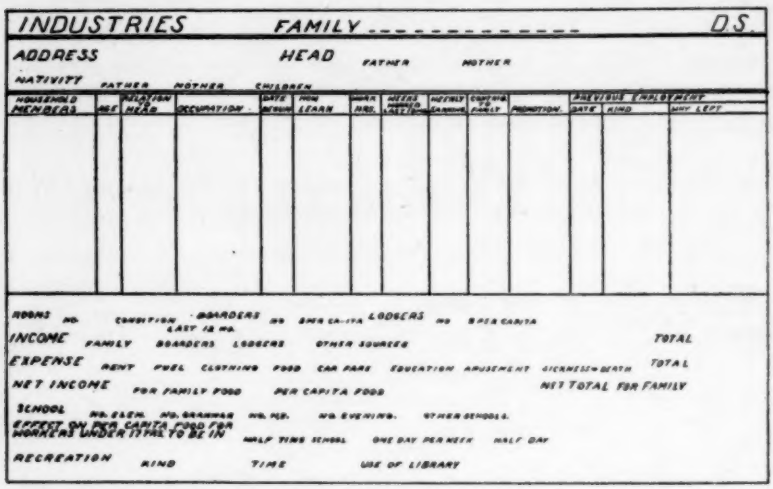
As the educational forces tend more and more toward including in the school's instruction the materials and processes of the industrial world, it becomes necessary to be informed on these things as represented in the lives of the people. In arranging this information for cards, the various industries and occupations may be divided into groups—Manufacturing, Mercantile, Building, Professional, and Agricultural. A single card may be given to each individual plant in a group. The whole group of information about industries might be for convenience divided into two parts—that which has to do with employment, and that which has to do with management. If desired, cards of different colors may be used for the different groups. The following cards indicate the general plan of the tabulation:

INDUSTRIES MANUFACTURES EMPLOYEES NAME ..... D.S.

NAME OF POSITION	MEN			WOMEN			BOYS				GIRLS				DIS.		ATTITUDE TOWARD INDUS. ED.	NO. IN EVEN. SCH.	NO. IN CONTINU. SCHOOL
	NO.	HRS.	PAY	NO.	HRS.	PAY	NO.	HRS.	PAY	ACC.	NO.	HRS.	PAY	ACC.	NONE	LUNCH			

FIG. 30



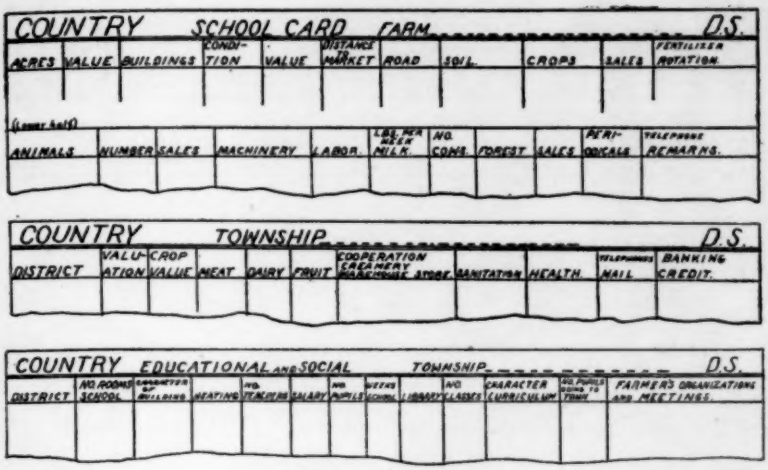


FIGS. 31 and 32

The items under "community environment" are intended to give information of a general nature so that a surveyor may have an idea of the setting of the community. Maps prepared after the order of the "folios" of the U. S. Geological Survey are excellent to show these items, and an effort should be made to get the "folio" of the region in question if it has been published. Information on this point may be secured by writing to the Geological Survey, Washington, D. C.

While the outline as a whole is adapted to any kind of community, the country surveyor will want a special form of card for the information of agricultural character. If the teacher of each country school is supplied with cards, the information about each farm can easily be obtained with the pupils' aid. Each farm is to have a 5" by 8" card of its own which may be divided into an upper and lower half, and thus a large amount of information can be put on a small space. This information may then

be summarized on one card. Three forms of cards that may thus be used are given here:


COUNTRY SCHOOL CARD FARM D.S.
ACRES VALUE BUILDINGS CONDITION VALUE DISTANCE TO MARKET ROAD SOIL CROPS SALES FERTILIZER ROTATION
(Same for 40)
ANIMALS NUMBER SALES MACHINERY LABOR LBS. PER WEEK MILK NO. COWS FOREST SALES PERIODICALS TELEPHONE REMARKS
COUNTRY TOWNSHIP D.S.
DISTRICT VALUATION CROP VALUE MEAT DAIRY FRUIT COOPERATION CREAMERY MACHINERY other SANITATION HEALTH TELEPHONES MAIL BANKING CREDIT
COUNTRY EDUCATIONAL and SOCIAL TOWNSHIP D.S.
DISTRICT NO. ROOMS SCHOOL CHARACTER OF BUILDING HEATING NO. TEACHERS SALARY NO. PUPILS WEEKS SCHOOL LIBRARY NO. CLASSES CHARACTER CURRICULUM NO. PUPILS HOME TO TOWN FARMERS' ORGANIZATIONS AND MEETINGS

FIGS. 33, 34, 35

The country districts are behind the times because, in part, of their lack of business methods. A great step forward will be taken if the people of the country can be helped to see the need of modern sanitary methods, to get a more just share of the wealth they produce through helping to eliminate middlemen, and to make a demand for the lowering of the unjust interest tax now demanded of the agriculturalist for the credit extended him. Through gathering and applying such items of value to the local conditions, the school through such a survey becomes the rallying point for the whole community.

D. FINANCIAL CONDITION OF THE COMMUNITY.
- a. Resources.
  - 1. Valuation.
  - 2. Tax rate.
- b. Liabilities.

E. SCHOOL SYSTEM.
- a. Business organization.
  - 1. Board of education.
  - 2. Administrative department.
  - 3. Teaching force.
  - 4. Housing.
  - 5. Salaries.

b. Educational organization.
   1. Departments.
   2. Enrollment.
c. Pupils.
   1. Ability. Binet measurements.
   2. Health.
   3. Distribution in grades.
   4. Aims of pupils.
   5. Time in school.
   6. Leaving school.
d. Supervision.
   1. Amount.
   2. Nature.
e. Instruction.
   1. Teachers.
   2. Texts.
   3. Methods.
f. Socializing influences.
   1. Clubs.
   2. Special Workers.
   3. Vocational Guidance.

A card showing the general financial conditions of the community may be arranged as follows:

FINANCIAL							D.S.
WARD or DISTRICT	VALUATION	ANNUAL BUDGET	LARGEST TAX PAYERS	TAX RATE SCHOOL .... ETC.	BONDS KINDS	INT.	

FIG. 36

This information will be most instructive if placed in a table or diagram where it can be compared with other cities. The community in question should be a median of the other cities with which it is to be compared, that is, there should be a group of cities with population as much above the given one as another group is below the given city in population, with an equal number of cities in each group. There should not be a wide variation in any of the cities from the given one.

To this point the survey has been outlined with a view to getting a setting and a thorough understanding of the conditions in which the educational scheme is placed. Also it is hoped that this information will be a basis for making parts of the school work and instruction more alive and more closely related to the problems of real life the pupils have to face.

In surveying the school system the business organization may be arranged on cards as follows:

SCHOOL BUSINESS ORGANIZATION SUPERVISION D.S.

ITEMS	BOARD OF EDUCATION	SUPERVISION OF EDUCATION: SUPT.	ASSIST. SUPT.	PRINCIPALS H.S.	PRINCIPALS ELEM.	PRINCIPALS SPEC.	TEACHERS H.S.	TEACHERS ELEM.	TEACHERS SPEC.	REMARKS
APPOINTMENT										
TERM										
SALARY										
NUMBER										
PROMOTION										
MEETING										
ETC.										

SCHOOL BUSINESS ORGANIZATION COSTS D.S.

SCHOOL	SALARIES	SUPPLIES BOOKS	SUPPLIES COAL	SUPPLIES MISCEL.	REPAIRS	HRS. PER YR. IN SESSION	PERCENT OF TOTAL TIME	NO. OF CHILD HRS.	REMARKS

SCHOOL BUSINESS ORGANIZATION HOUSING D.S.

SCHOOL	CHARACTER OF BUILDING	ROOMS NO.	ROOMS SEATS	ROOMS LIGHT	ROOMS DECORATION	HEATING COAL PER YR.	HEATING GRATE SURFACE	HEATING CENT. HEATED	VENTILATION	DRINKING FOUNTAINS TOILETS	CLEANING	YARDS

FIGS. 37, 38, 39

The exact relationship between the various departments may be well shown by some such diagram as has been illustrated for Baltimore. In the table on "costs," the unit called the "child hour" is for one child at work in school for one hour, regardless of the amount or quality of the work done.

SCHOOL EDUCATIONAL ORGANIZATION ENROLLMENT D.S

SCHOOL	ELEMENTARY DEPT. KINDER. NO.	%	1 NO.	%	2 NO.	%	3 NO.	%	4 NO.	%	5 NO.	%	6 NO.	%	7 NO.	%	8 NO.	%	PART TIME	SECONDARY DEPT. 9 NO.	%	10 NO.	%	11 NO.	%	12 NO.	%

FIG. 40

Nearly every educational system will have an elementary and a secondary department, and any part that does not classify definitely as either may be called special.

SCHOOL EDUCATIONAL ORGANIZATION SPECIAL D.S.

SCHOOL	NO. SESSIONS	NO. PUPILS	% ATTENDANCE	COST PER PUPIL	NO. SCHOOLS	NO. TEACHERS	AGE DISTRIBUTION
NIGHT							
ETC.							

FIG. 41

From the information in these tables a graph may be drawn that will point out just where the lowest per cent of attendance lies. If the average cost per pupil is obtained for each grade, two graphs may be drawn, one showing the total number of

pupils attending for each grade, and the other graph the cost of instruction per pupil for each grade.

A great deal of information about pupils can be shown on the "Grade and Progress" cards, devised by the New Jersey Department of Education, to accompany the bulletin on "The Treatment of Subnormal Children."[2] The form is as follows.

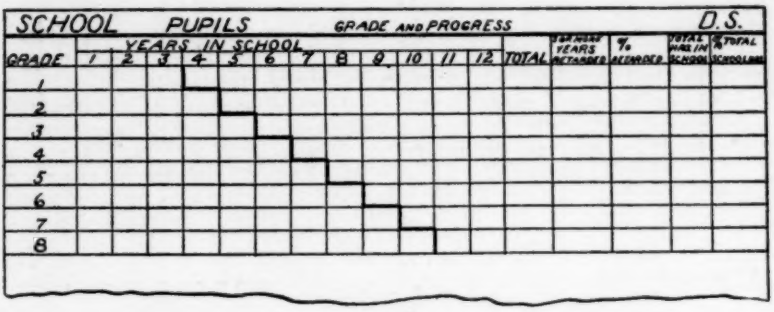


FIG. 42

A card should be made for each one of the different schools. From this card it may be instructive to prepare a distribution curve to show just where the retardation is the greatest.

Because of its influence in determining the future career of a pupil, and the course of instruction that must be given, the determination of mental ability is of great importance. Such determinations can not be absolute because of the present imperfect conditions of our measuring scales. Yet the various modifications of the Binet-Simon scales offer a more scientific means of testing mental ability than any others yet devised. There seems to be little doubt that much energy of teachers with large classes is wasted because of the presence there of some mentally retarded pupils, and likewise some especially bright children are kept marking time because such pupils are not recognized. The 1911 revision of the Binet-Simon tests by Dr. Henry Goddard of the Training School at Vineland, N. J., has the advantage of being short and at the same time quite widely tested. When such tests are made, the information could be tabulated on a card similar to the "grade and progress" card:

[2] "The Treatment of Subnormal Children," Bulletin, May, 1912, Department of Public Instruction, Trenton, N. J.

SCHOOL PUPILS MENTAL ABILITY D.S.

MENTAL AGE	TRUE AGE 3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL 1 YR. RETARD	% 1 YR.	TOTAL 2 YR. RETARD	% 2 YR.	TOTAL 3 YR. RETARD	% 3 YR.
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

FIG. 43

Health is one of the great factors in efficiency, and schools have given too little attention to it under the impression that it was altogether the business of the individual whether he was weak or strong. We now are beginning to see that the community is also responsible, for the condition of every individual has its influence on the community in which he lives.

SCHOOL PUPILS HEALTH SCHOOL..... D.S.

CASES CHARACTER	DATE	PHYSICIANS	NO. VISITS	NURSES	TESTING APPARATUS	PARTS TESTED	CHARACTER OF TESTS	TOTAL TESTED	NO. DEFECTS

FIG. 44

For information on supervision and instruction the items may be arranged as follows:

SCHOOL SUPERVISION D.S.

SUPERVISOR	CHARACTER OF SUPERVISION	PLACES TO VISIT	HRS. PER WEEK TEACHING	TIME FOR LOOKING AROUND	TIME ON ROAD	PERSONALITY	AGE	TERM OF YR.	RELATIONS WITH TEACHERS	CONFERENCES
SUPT PRIN ETC										

SCHOOL INSTRUCTION SCHOOL..... DS

TEACHER	ALL	GR	NO. HRS	EXPERIENCE	PERSONALITY	DISCIPLINE	PROFESSIONAL STUDY	RECREATION	CHARACTER OF TESTS	METHODS	COURSES OF STUDY
											INDUSTRIAL MATERIAL LIFE CONNECTIONS

FIGS. 45 and 46

All schools do more or less work of a social nature but it is not often recognized as such. In recent years attention has been called to such work in the crowded sections of large cities, but it is believed that there is room for such work in every community and that the school should be the center from which it radiates.

In most communities the column on "vocational guidance" must be left blank simply because nothing is being done there. One of the reasons for outlining this card on "socializing influences" is to help call attention to the glaring lack of these important phases of the educational work.

SCHOOL	SOCIALIZING INFLUENCES		SCHOOL		D.S.	
CLUBS OR GROUPS	NO. MEM.	TOPICS	TIME GIVEN	SPECIAL WORKERS	HOME VISITS	VOCATIONAL GUIDANCE.

FIG. 47

We believe vocational guidance to be one of the essential features of a public school system. Vocational guidance is used here, not in the sense of a bureau which shall find jobs for pupils leaving school or even for graduates. Miss Alice P. Barrows[3] in her investigation work in New York City for the Public Education Association has come to the conclusion that it would be unwise to establish anything in the form of an employment bureau in connection with public school work and emphasizes the fact that the cry "I must leave school to work to help support the family" is not due in most cases to real economic pressure but to other causes. Mr. Jesse Davis of the Grand Rapids, Mich., high school says vocational guidance should be aimed at retention, not elimination of the pupil from the school. As indicated later, it is hoped that in every elementary and high school there will be appointed some wise and sympathetic person who will help and counsel boys and girls in finding a definite and suitable line of endeavor for which they can prepare and look forward.

[3] From Miss Alice P. Barrows, Director of the Vocational Guidance Survey, 40 W. 32nd St., New York City, much valuable information has been received relating to vocational guidance and the organization of such investigations.

Such a detailed survey will take somebody's time and also some money and must justify itself by bringing a good return to the community. Those desiring such a survey must show that there will be a return in dollars and cents or its equivalent. Such a demonstration may be along the line of: saving in expeditures; increased efficiency and hence more service for the same money; or, greater comfort, hence greater efficiency.

For example, if the survey should point out that an outlay of $12,000 on vocational classes would increase the earning capacity of one hundred boys $20 per year, thus bringing to the community an additional $20,000, it will mean that the community's capital is increased on a four per cent basis by $500,000; and this says nothing of the boys saved from loafing or from being public charges through arrest and jail or other places of detention.

Two young women in Mt. Vernon, N. Y., learned the elements of plain sewing at the industrial school in that city. Before the girls had completed the sewing course given by the school they opened a shop of their own and soon became not only self-supporting, but able to give other girls employment. Is it worth while to have a survey point out that conditions may be ripe to give the girls of other towns such advantages?

Or, if the survey would show by a change in the content of some courses that one hundred girls would be enabled to take home some practical ideas of food values and food preparation, so that their fathers' mid-day lunch would be something more than a "filler," there would certainly be one hundred more contented workmen and again a greater efficiency. It surely could be shown that a palatable meal fittingly served would have much to do with a contented and happy home to the detriment of many a saloon lunch-counter.

It is probable that most communities will fall under some one of the following types:

First, the large cosmopolitan city over 50,000 in population.

Second, the small city of diverse industrial interests with population from 10,000 to 50,000.

Third, the town or village which is the center of a wide agricultural region and whose industries are closely related to the

country. Occasionally there may be found a large manufacturing plant. The population of such a community is under 10,000.

Fourth, the country community whose dominant interests are some form of agriculture.

Now while it is not possible to make up four courses of study and say that each of the above communities should pursue the course laid down for that type, yet, because we know the people as a whole and can note the general characteristics of these communities, it will be possible, in the light of our ideals for the American people, to indicate the general tendencies which the educational plan should take in these several communities.

Let it be assumed that the sanction of man's education is to be found in his wants and his aspirations. Every rational human being has at least three fundamental wants to satisfy: on the physical side, hunger and shelter; on the spiritual side, society. Primarily the hunger want is satisfied by food products; the shelter want, by textiles, wood, metals, and clay products; and the social want, by culture products as feelings and attitudes, friendships and loves, thoughts and religion.

Now man's method of dealing with these materials and the attitude he takes toward them through their literary relationships, their mathematical relationships, their environmental relationships, their historical relationships, their industrial relationships, and their esthetic or art relationships will result in skill, theory, and appreciation. But skill and theory together result in production, while theory and appreciation result in power to use. Unite these two with faith in the Infinite, and the highest aspiration of the human race is achieved in the God-fearing man of service.

The following scheme is intended to show the idea diagrammatically:

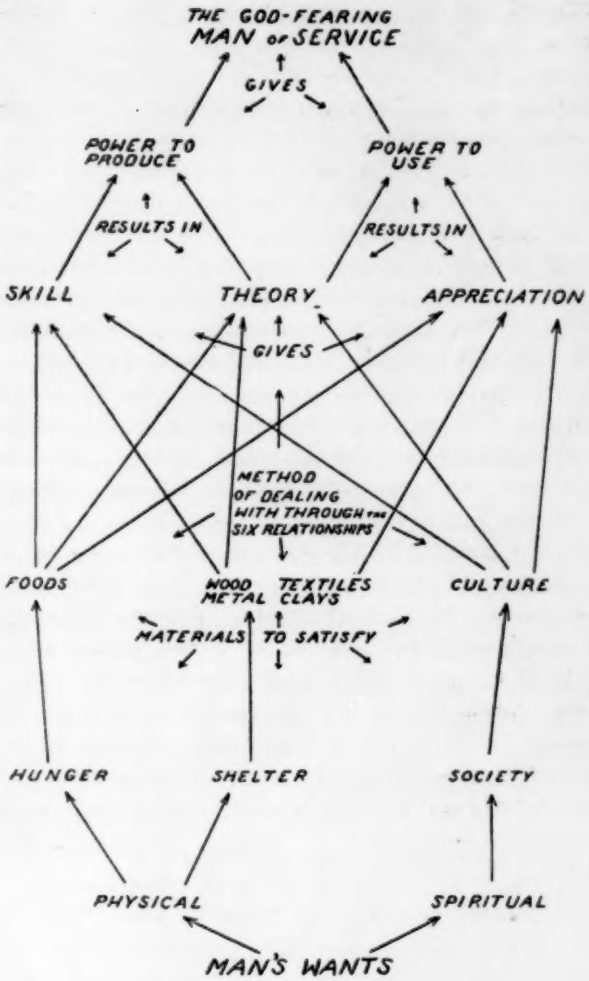


FIG. 48

If the above plan of human life is the correct one, it points to the ideal individual as one who can share in the production

as well as in the use of those things of most worth in the world. It is the business of education to produce such an individual, consequently the course of study must be shaped so that it will provide appropriately for skill, theory, and appreciation. All through life man is dealing with the materials that satisfy his wants along the lines of the six relationships above mentioned. Now if education is a life process these six relationships become the basis of the curriculum of the true school. The literary relationship will include English, reading, language, rhetoric, literature, etc., and foreign languages. The mathematical relationships will include arithmetic, algebra, geometry, etc., mechanical drawing and commercial subjects as bookkeeping, stenography, typewriting. The environmental relationships will include geography in all its forms of locational and physical, science in the forms of nature study, biology, sanitation, gymnastics, physics, chemistry, and agriculture. The historical relationships include the stories of man's achievements and his struggles for mastery and high ideals. The esthetic relationships include the forms of graphic expression, design, and music. The industrial relationships are concerned with the dominant processes in the production, manufacture, and use of those materials that satisfy man's physical wants. For school use they may be organized under typical activities of the race as, How the race puts itself on record, How the race provides its food, How the race provides itself with clothing, How the race provides its shelter, How the race provides utensils, and How the race provides tools and machinery.[4] Here are to be found the elementary foundations of all vocational life and instruction. Domestic science and domestic art; metal and wood work of all kinds; and the ceramic arts, all find a beginning in these activities.

Now we believe it to be the business of the elementary school —approximately the first six years of school life—to handle this industrial subject matter in such a way that " every pupil before he leaves school should know the chief characteristics of these industrial materials and have some notion of their value as determined by the processes." " The method of this work is

[4] This organization of the industrial arts material is that made by Miss Lois Coffey, instructor in Industrial Arts, Teachers College, Columbia University, New York.

to be by means of a combination of handwork, application of design, and in the giving of information."[5] It is not intended that the industrial relationships shall constitute the whole curriculum but rather the six great relationships shall be carried along side by side woven one within the other so that one constantly aids and assists the other.

Out of this industrial material as a motive should grow much of the work of the instrumental studies as reading, spelling, language, arithmetic, and geography. This mass of industrial material, which may be called Group A, should be a part of the work of every elementary school no matter in what community it may be located.[6]

Beyond the elementary school should be an intermediate period of two or three years characterized by an effort to focus the scattered tendencies of adolescence toward a definite line of endeavor. Here boy's work will begin to be separated from girl's. Boy's work will be concerned with specific constructive processes in woods, metals, clays, and electricity; the girl's in the same manner will deal with foods, textiles and other allied industries. This work of intermediate grade, together with the accompanying appropriate work of the other five relationships, may be called Group B.

By the end of the intermediate period, it should be fairly apparent what line of life work a boy or girl is fitted to pursue. It is during this intermediate period that a vocational guidance committee may begin its work. This division of the educational work may be designated as V. G.

Beyond the intermediate division is the secondary school period. This will be characterized by, first, work leading to more advanced study as the preparation for medicine, law, etc., H. S. P.—which means High School Professional; and second, specific training for some vocation, H. S. V.—High School Vocational. It may be understood here that specific training for some vocation is carried on under the auspices of the secondary

[5] School and Industrial Life, James E. Russell, pamphlet, Industrial Education, Teachers College, Columbia University, New York, 1912.

[6] See the Speyer School Curriculum, published by Teachers College, 1913.

school even though the pupils may not be of high-school rating in academic subjects.

Some young people at work will probably need further aid from the educational system, so it may be necessary to form special classes at hours specially arranged during one or two days per week. This is Group C,—the Continuation Classes. Adult workers wishing further instruction in the technology of their respective lines may be arranged for in the Evening School—Group D. In cities having highly centralized productive industries, the Trade School—Group E may be needed.

With this plan in mind one may arrange a tentative outline of the approximate requirements of the typical communities, bearing in mind always that the local conditions must have a large share in shaping the details of any system. The respective types of communities will need to provide the work of the several foregoing groups somewhat as follows:

The Country Community:

Groups A, B, V. G., H. S. V., especially adapted to agricultural conditions.

The Village or Town:

Groups A, B, V. G., H. S. P., H. S. V., with especial reference to the industries of the community. Possibly Groups C, D.

The City:

Groups A, B, V. G., H. S. P., H. S. V., C, D, and in some cases E.

Such a scheme merely sets up an arbitrary standard toward which the surveyor may look as he prescribes for the ills or defects of communities. The foregoing is not intended to be an exhaustive treatment of the survey problem, but simply suggestive of some of the methods which may be used in carrying out a community survey in connection with the educational system.

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SOCIAL PHASES OF INDUSTRIAL LIFE AND THEIR RELATION TO VOCATIONAL GUIDANCE

WITH A PRELIMINARY OCCUPATIONAL STUDY OF NEW YORK CITY

Robert J. Leonard

Any scheme for vocational guidance to be of real and permanent worth to individuals and society, must be based upon the general principle of interpreting life in all its manifold aspects. A deliberate and intelligent vocational choice is the expression of the individual's estimate of life values. Of course in the great majority of cases at the present time, and particularly in the field of industry, the occupation has not been deliberately and intelligently chosen. The blind entrance into industrial life has frequently been a compulsory step, made necessary by immediate financial stress, the particular industry entered being the one that has loomed large on the horizon of the individual and family.

In a vocational study aiming to interpret life activities, it is not sufficient to take into consideration only the materials, processes, and various specialized methods of technique required for immediate monetary returns. There is another aspect even more vitally important, wherein the social side, or that of human relationships, is considered. The relation of the product of the worker to the welfare of the community, the effect of the work upon the worker, the adjustments between types of workers and the life of the community, and the opportunities for service in the various occupations, are essential factors in a comprehensive vocational study.

In the field of industry, therefore, as in every other field of human activity, the constituent elements in vocational guidance may be grouped under the three main heads suggested, namely (1) materials used; (2) the processes of manipulation; and

(3) the involved social relationships. In certain cities various plans have been worked out in considerable detail for presenting systematic information relative to the materials and processes involved in the various industries. But there have been few, if any, systematic attempts to classify and present the information relative to the social phase of industry.

The first section of this paper is an outline of the content of this social phase of industry, and is an outgrowth of the work in Industrial Art in the Horace Mann School. It is proposed as a basis for vocational studies in the upper elementary grades and in high schools. It is suggested that every pupil in all public schools should be led to a knowledge of such material because of the general socializing effect which is sure to result.

That this social content is vitally important, no one will contradict; such has been admitted again and again in a general way, but the full force of its importance is not realized until one has been brought into close contact with the facts. The study of these facts brings one immediately to the very heart of the present social and industrial problems of our country, and introduces one to a critical study of the successes and failures of democracy, and the conditions which are turning all classes of people to meditative study.

The social content, for purposes of elaboration, is divided into two topics, namely, the immediate social relationships; and the related social content.

Immediate Social Relationships

I. The conditions under which human efficiency, in industry, may be attained.
   1. Living wage, sufficient for,
      a. Food, shelter, and clothing.
      b. Education of children.
      c. Amusement, church, charity, and social intercourse.
      d. Residue for insurance, sickness and old age.
   2. Reasonable hours of labor.
   3. Healthful conditions under which labor is to be performed.—Pure air, regulated to proper temperature and free from injurious dusts and gases. Dangerous machines properly guarded.
   4. Machines regulated to normal human organism.
   5. Relation of the particular process to the whole.
   6. Provision for leisure time.
   7. Relation of work to community.

II. Factors in various industries tending to prevent human efficiency.
  1. Type dangers.
    a. Indoor occupations more dangerous than outdoor.
    b. Exposure to irritating dusts, metallic, mineral, animal and vegetable dust.
    c. Exposure to infectious dust—rags, papers, and wool industries.
    d. Exposure to poisonous gases—lead, arsenic, etc.
    e. Industrial accidents.
    f. Tenement industries.
    g. Fire hazard.

III. Individual factors conditioning efficiency.
  1. Age—problems of child labor.
  2. Sex—women in industry.
  3. Maturity—health and temperament.
  4. Education.

IV. Community relationships and problems growing out of industrial life.
  1. Characteristics of classes and class feeling resulting from industry leading to formation of:
    a. Trade unions—American Federation of Labor.
    b. Manufacturers' alliances, etc.
  2. Mediating agencies between the classes.
    a. National.
      (1) U. S. Railroad Wage Rate Board.
      (2) U. S. Department of Labor and Commerce.
      (3) National Civic Federation.
    b. State.
      (1) Massachusetts Minimum Wage Board.
      (2) New York State Department of Labor, etc.
  3. Dependent individuals and families due to conditions under which labor is performed and methods of preventing such community loss.
    a. Consumers' League.
    b. Industrial Insurance.
    c. Employers' and Workers' Liability Acts.
    d. Measures to regulate Tenement Industries.
    e. Measures requiring machines to be properly guarded.
    f. Factory Construction Acts.

RELATED SOCIAL CONTENT

I. Industrial history.
II. Industrial biography.
III. Potential opportunities for service through industry.

I. *Human Efficiency or Self-Realization*

In a democracy it is assumed that every one not only has the right, but should be given the opportunity, to become an efficient producer and member of a family and community unit; in other words, to realize himself completely as a man at work in the world, contributing to the welfare of others, serving well his home and family, and as he works realizing the divineness of

himself and his calling. Such a realization is only possible under certain conditions, the first of which is a living wage.

The term "living wage" is used rather than "existing wage" to imply an income more than enough to meet each day's most primal needs. A living wage is sufficient to provide for food, shelter and clothing, for the education of the children, for amusement, church, charity, and social intercourse, and for a residue for insurance, sickness, and old age. It is not within the province of a social study of this type to attempt to formulate or suggest wage schedules. It is rather an attempt to point out an ideal toward which we are striving and which should be in the minds of every one within whose power the determination of wages falls.

In a study of incomes and family budgets,[1] it is clearly seen that a bricklayer with an income of four hundred dollars per year and a family of six to provide for, is not receiving a living wage. "The average of the expenditures of the so-called independent poor families, that is, those with incomes below six hundred dollars, seems a fair average minimum expenditure for existence in New York City without receiving aid."[2] "It therefore seems a conservative conclusion to draw from this study that a 'fair living wage' for a workingman's family of average size in New York City, should be at least seven hundred and twenty-eight dollars a year, or a steady income of fourteen dollars per week. Making allowance for a larger proportion of surplus than was found in these families, which is necessary to provide adequately for the future, the income should be somewhat larger than this, that is from eight to nine hundred dollars per year."[3]

Important as the living wage has been found to be, it is not the only factor to be considered. Hours of labor, as well as wage schedules, must be considered as one of the factors of efficiency. Nation-wide agitation has corrected many of the former evils of long hours, but much remedial legislation is still required in those trades and industries where organized labor has not gained a strong foothold, and where women and children

[1] Wage Earner's Budget, More, p. 20. Greenwich House Series of Social Studies, No. 1. Henry Holt & Co.
[2] *Ibid.*, p. 123.
[3] *Ibid.*, p. 269-270.

are largely employed. This is particularly true in New York State in the laundries and canning factories.

Not only should the worker be given leisure time, but the community should provide wholesome ways and means for spending this leisure time. Experiments in recreation centers have proved to be good community investments.

Furthermore, all labor should be performed under healthful conditions, which means that there should be an abundance of pure air regulated to the proper temperature and free from injurious dusts and poisonous gases. The worker should be shielded as far as possible from immediate contact with dangerous machines, hot, poisonous liquids, and the multitude of conditions dangerous to life and limb. That this problem deserves detailed and serious consideration is shown in a recent study of a selected area of industries in New York City, the following table being a summary of the findings relative to cleanliness.[4]

"A" means clean and well kept.
"B" means fairly clean.
"C" means dirty.
"D" means very dirty.

TOTAL NUMBER AND PER CENT OF MEN, WOMEN AND CHILDREN CLASSIFIED ACCORDING TO GRADE OF CLEANLINESS IN WORKROOM

Cleanliness	Number of men	Number of women	Number of children	Total number	Per cent.
A	246	445	31	722	6.8
B	4,751	1,359	63	6,173	57.7
C	2,892	423	5	3,320	31.0
D	466	17	0	483	4.5
Total	8,355	2,244	99	10,698	100.0

Machines operated by workers, should be regulated to the normal human organism, rather than to the limit of human capacity and endurance. There is a tendency in some industries to speed the worker to his limit, taxing his vitality to the utmost, leaving him broken down and useless in a few years, to be cast aside

[4] Preliminary Report of the Factory Investigating Commission, 1912, Vol. I, page 307.

like so much scrap-iron and replaced by another new and vigorous worker, who in turn is sacrificed to the same conditions.

The modern factory system tends to develop specialized individuals, efficient to a high degree in a particular process, but ignorant concerning the general setting of a particular process to the whole. An understanding knowledge of all the processes involved will not reduce the worker's speed or efficiency, but will develop intelligence and understanding which in turn results in natural progress and deserving promotions. The present system minimizes the possibility of progress and advancement. This broader understanding and appreciation of the whole is one of the requisites of improvement in modern life.

The factors already enumerated must be supplemented if efficiency is to be complete. This supplementary material is concerned with the general attitudes which the worker bears to his work. If these attitudes are not wholesome, the work will be real drudgery and the worker bowed in spirit. The doctor or teacher often thrills with the realization that others are dependent upon him, and that he is serving his fellowmen. The wearied toiler might thrill with the same enthusiasm if he but realized the service that he is continually rendering to community life. And with this in mind the weary hours would be changed to hours of hopeful, earnest joy.

Yet if he is to reach the climax of his powers, he must go one step further and realize his place in the great scheme of creative agencies that are working through the Infinite toward a higher type of life and human perfection. He would say with George Eliot's Antonio,

> "'Tis God gives skill,
> But not without men's hands. He could not make
> Antonio Stradivari's violins
> Without Antonio."

II. *Factors in Industry Preventing Efficiency*

On account of the variability in standards of living, wages, hours of labor, etc., in the various parts of the country, it is impossible to classify the industries on the basis enumerated in the preceding paragraphs. The general tests have been enum-

erated in a sufficiently broad manner to permit of local application. It is believed, however, that there are certain type conditions sufficiently uniform and universal to permit of profitable study and at least tentative classification. The second factor enumerated under the general topic, efficiency, that of healthful conditions under which labor is performed, forms a basis for the critical analysis of certain industries.

In the main, those occupations which are pursued out of doors in the open air are more healthful than the indoor occupations where the air is apt to become vitiated and poisoned by gases, etc. In the report of the Committee of Social Betterment of the President's Homes Commission of 1908, edited by Dr. George M. Kober, the various dangers to workers are clearly set forth. Occupations involving exposure to irritating dust are rated among the most harmful to workers. The coarse particles of dust lodge in the membrane of the air passages and vesicles of the lungs, producing inflammatory conditions thus favoring infection by the tubercle bacillus. Figures are cited showing that men employed in dust producing occupations suffer more frequently from pneumonia and consumption than those not so exposed. The relative frequency of these diseases per one hundred workers from a given group is as follows:

PER CENT OF CASES OF CONSUMPTION, PNEUMONIA, AND DIGESTIVE DISORDERS PER 100 WORKERS IN CERTAIN OCCUPATIONS[5]

	Consumption	Pneumonia	Digestive disorders
Workers in metallic dust	28.0	17.4	17.8
Workers in mineral dust	25.2	5.9	16.6
Workers in mixed dust	22.6	6.0	15.2
Workers in animal dust	20.8	7.7	20.2
Workers in vegetable dust	13.3	9.4	15.7
Workers in non-dusty trades	11.1	4.6	16.0

Metallic and mineral dust poisoning results from the cutlery and tool industry, especially in the grinding and polishing departments, not only from filing the metallic surfaces but also from the grindstones, and emery, and carborundum wheels. The death

[5] Harrington, Practical Hygiene, 1902, p. 678.

rate for twelve years in the city of Northampton, Mass., one of the centers of the cutlery and tool industry, shows that among "grinders," "polishers," and "cutlers," diseases of the lungs were 72.73 per cent of the mortality, including 54.5 per cent from tuberculosis.[6]

Stone cutting is regarded as a dangerous occupation especially in the operation of pneumatic drills on account of the free flying dust. The emery or carborundum industries are also to be classed among the dangerous occupations for the same reason.

According to the reports of the census of 1900 the consumption death rate of marble and stone cutters in the United States is six times that of bankers, brokers, and officials of companies and the mortality of five other employments.[7]

"Laborers in grain elevators, and grain threshers, bakeries, etc., are subject to a very irritating dust often causing nasal catarrh of the mucous membranes. Workers in tobacco suffer more or less from nasal, conjunctive, and bronchial catarrh, and nervous derangements, and although the mucous membranes gradually become accustomed to the irritation of the dust and fumes, the occupation appears to be dangerous, and the consumptive rate ranks next to that of stone-cutters."[8]

Various phases of the textile industry are decidedly injurious to the worker on account of the free particles of fabric in the air. There are other types of industry that involve exposure to infectious matter in the dust, such as the rag, paper, and wool industries. Rags are often sorted and cut up without having been disinfected and disease germs are present in great abundance. This type of danger is especially prevalent in New York City, on account of the great number of people engaged in sorting over in basements and dilapidated buildings old rags for the paper industry. In a study made by Miss Goldmark of industries of a selected area in New York City she alludes to the dangers:

"One establishment, employing sixteen persons, handles cotton and woolen rags. The sorters are women. They sit on the floor and separate the woolen rags according to colors. These rags

[6] Report of State Board of Health, Mass., 1907, p. 87.
[7] Kober, *Ibid.*, p. 17.
[8] Kober, *Ibid.*, p. 23.

have been collected from households and shaken out by the collectors, but have not been cleaned or disinfected. They give off dust at each handling. The cotton rags are sorted in the adjoining room where light and ventilation are fairly good. They are even more unpleasant to handle and more likely to convey infection."[9]

All occupations involving exposure to lead dust or fumes are very dangerous. Particles of lead are inhaled, swallowed or absorbed by the skin, resulting in lead poisoning.

The preliminary Report of the Factory Commission ascertained that there were thirteen distinct industries and thirty-two miscellaneous industries in which lead is used in New York, and in every case there is great danger of lead poisoning. The death rate among printers in New York City from tuberculosis is very high, due partly to the unfavorable rooms in which it is carried on, but also to the presence of lead dust in the type cases, etc. The regulation of the Federal Council of the German Empire put into effect July 31, 1897, shows with what care it is necessary to minimize disease in this occupation. This legislation is suggestive of what might be done in United States.[10]

Irritating and poisonous gases are a constant source of danger to workers. Among the most dangerous gases are arsenic, sulphur, hydrochloric acid and others of like nature. Also the workers engaged in the manufacture of phosphorous matches, especially where the white substance is used, are subject to serious diseases. The danger has been practically eliminated by the use of red phosphorous.

Diseases resulting from all forms of free dust and gases might be minimized by the use of exhaust devices, respirators, etc., and children should be taught these means of protection.

There are other groups of occupations involving exposure to extremes of temperature and air pressure that are very injurious to the workers, such as moulding and foundry work, and all forms of caisson and tunnel work.

Industrial accidents not only result in great community loss, but cause untold suffering and privation. It is sufficient for this

[9] Industrial Commission Report, p. 363, New York State, 1912, volume I.
[10] For detailed study, see Kober, pp. 35-39.

article to point out that in 1909 in New York State there were reported to the State Labor Bureau, accidents involving 16,830 workers, but no exact estimate of the loss of time and wages is available. A glance at the death calendar[11] in industry in Allegheny County, Pa., shows an alarming number of deaths each month in the steel industry.

The work of the "New York Museum of Safety" deserves study in the vocational guidance courses.

The presence of tenement industries in the great cities, presents a very grave problem. The work is pursued in most cases under conditions which are unsanitary, and the products are apt to contain germs of contagious diseases. For the most part the work is carried on by women and children and most of the diseases of this class of people result from the presence of home industries. "The tenement industry is without standards of any kind, and is essentially parasitic in its nature. The wage received represents the total earnings of the family group, the mother (in some cases the father, also) and the children. In nut picking, for example, the average day's work will net about forty cents for the family, which means at least five hours' work a day from five or six people. The highest wage was twelve dollars a week for operating on doll's clothes earned by the combined labors of the father, mother and three children from eight to twelve years of age, the children working after school hours and on Saturday.

"The competition between homeworkers themselves and between the homeworkers and the factory hands reduces the wages to a minimum. In some industries when work in the factory is slack, employees are paid off and put on part time, yet large quantities of work are given out to the homeworkers. In the manufacture of brushes, practically the entire article is made up in the home, only a small group of workers being employed in the factory to put the materials in shape for the jobber."[12]

All types of industries where there is danger from fire, are a menace to the community as well as to individuals. In the factory life in New York City this is a constant danger, because

[11] Work Accidents and the Law, C. Eastman, Pittsburg Survey.
[12] Factory Investigating Commission Report, 1912, N. Y. State, page 90.

of the widespread use for factory purposes of the converted tenements and dwellings, and the non-fireproof loft buildings. The hazard in the paper box and textile industries is great, because of the combustible nature of the material, the congestion in the rooms in which the work is carried on, and the presence of waste material on the floor and in dark corners.

Variety in wage schedules and diversity in the cost and standard of living in various localities prevent any detailed statement concerning wages. A "living wage" under one condition in a given locality may not be the same in a different locality. As a rule, however, those occupations in which women, children, and foreigners are engaged, do not meet the standard set forth relative to wages.

The above outline can only be fragmentary because as a nation we have not the facts at hand from which to study the exact effect of the conditions of labor upon society. It is for the schools to help in the further development of the spirit of inquiry and to impart such information as has been already ascertained, particularly in regard to the dangers incurred in the various industries and the possible methods of minimizing these dangers.

III. *Individual Factors Conditioning Efficiency*

With the older types of industrial life one learned through the apprentice system all the various branches of the trade or industry and it was possible for one of rather tender age and limited school education to enter the trade and become not only an efficient producer but an efficient citizen as well. To-day such a thing is not possible, on account of the present factory system and the specialized nature of the work given each worker. At least six factors must be considered under this heading, namely, age, sex, maturity, health, temperament, and education.

A study of the factor of age leads us to the problem of child labor. As a nation we are opposed to unrestricted child labor, not only because of our sensitive feelings relative to the worth of individuals, but because there is danger that the child laborer sooner or later may become a public charge. In other words, the opportunity for self-realization, as described in detail

under human efficiency, is denied the child-worker. The chances are that he will never be able to command a living wage on account of his ignorance and enfeebled vitality. The study of child labor might be approached from the psychological side, showing the effect of too early habituation of a few limited movements upon the mental life, or from a moral standpoint showing the general degeneration of the moral fibre resulting from an enfeebled physique, or from the social standpoint showing the weakening effect upon the whole fabric of society.

The study of industrial activities relative to sex is no less important. The old theory that human instinct tends to place individuals in occupations best suited to them, is rapidly breaking down under the tremendous stress of modern city life. This is especially true of women in industry. In the state of New York, according to the preliminary report of the U. S. Census for 1910, 293,637 women were employed in manufacturing establishments, or 30% of all its wage-earners were women. "The only industries in which women are not employed are the manufacture of bricks, tiles, fertilizers, and ice. The average time a woman remains in a factory is seven years, the majority of women leaving in a few years to marry. The state is therefore interested not only in the welfare of women as workers, but has a deep concern in seeing that while adding economic wealth to the state they work under such proper conditions as will not impair their health and vitality as mothers."[18]

"In the following six trades, e. g., artificial feathers and flowers, waists, paper boxes, textiles, and men's clothing, 60% are women. A detailed study of any of these trades reveals the fact that there are elements in it very dangerous to the health and to future generations." The report cited contains detailed information as to just what these dangers are.

"Women were found employed in the foundries in Syracuse and Buffalo. They work under exactly the same condition and with the same surroundings as the men. They are subjected to the fumes of the gases and smoke. The work means severe manual labor, and altogether the occupation seems to be a most

[18] Preliminary Rept. of the Factory Investigating Commission of the State of N. Y., 1912, Vol. I, p. 93.

dangerous one for a woman in so far as her health is concerned. A majority of these women seem to be of foreign birth although there are some who are native born. The wages received by them are small, between four and eight dollars per week, while the men doing similar work receive about three dollars a day. Their employment in that industry is not only a great injury to themselves but a menace to posterity, and should not be tolerated by any civilized community."[14]

Such surveys as were made by the Russell Sage Foundation in Philadelphia, concerning women in industry, are furnishing the material not only for intelligent legislation, but also the basis for guiding women in vocational choice.

A study of occupational diseases reveals the fact that certain types of diseases accompany certain occupations. It is very necessary therefore that the general maturity and health of a prospective worker be ascertained before he be permitted to enter industrial life. Thus, one with general tendency towards weakness or under-development in the respiratory tract should avoid occupations where free dust of any kind, especially metallic and mineral dust, may be in the air.

It is contended that the general field of physical adaptation to industry is one of the most important phases of vocational education. Systematic information may be obtained concerning health prerequisites to successful careers in some of the industries, but there is room for a great deal of scientific research in ascertaining definite facts.

Mental characteristics and general temperament are also of great importance in determining individual adaptation to certain industries. "To give an illustration, there are mills in which everything depends on the ability of the workman to watch, at the same time, a larger number of moving shuttles, and to react quickly on a disturbance in any one. The most industrious workman will be unsuccessful at such work if his attention is of a type that prevents him from such expansion of mental watchfulness. The same man might be most successful as a worker in the next mill, where the work demanded was dependent upon

[14] Preliminary Rept. of the Factory Investigating Commission of State of N. Y., 1912, Vol. I, page 107.

strong concentration of attention upon one point. There he would surpass his competitors just because he lacked expanded attention and had the focussing type. The young man with an inclination to mill work does not know these differences, and his mere self-observation would never tell him whether his attention was of the expansive or of the concentrated type."[15]

Various vocational studies have hinted at the factor of temperament relative to particular vocations, but there is still great need for more systematic information than is at present attainable.

It has already been suggested that the pursuit of an industry at the present time, without a general and specialized education, tends to result in inefficiency. The school has been at fault in not including in its curriculum studies that will result either in industrial efficiency or in sympathetic insight relative to the significance of daily toil.

The specialized training for industrial efficiency must be a part of the educational scheme in intermediate schools and high schools, and every subject in the general curriculum must be made to yield its full possibility relative to the general significance and meaning of honest work. Various studies have been made proving beyond doubt that it actually pays a worker to remain in the school that provides technical and cultural material. This fact and the supporting evidence should be incorporated in a vocational study.

IV. *Community Relationships and Problems Growing Out of Industrial Life*

In some of the newer communities of the Middle West and West, the lack of cheap labor is often deplored because it seems to hamper rapid development of industrial and factory life. The underlying philosophy of such thinking must be that the presence of great factories and manufacturing establishments operated by cheap labor tends to uplift the community life and increases the general wealth of the community, thus attempting to justify the basis of the philosophy. Such a philosophy, however, does not adequately consider the problems that have developed as a result

[15] Finding of Life Work, Munsterberg in *McClure's*, Feb., 1910.

of so-called cheap labor in the older eastern cities. These problems are present in type, at least, in all communities, but the overwhelming nature and scope are only realized in the great industrial centers. Cheap and ignorant labor is undesirable because it creates a class that can never reach the standards of efficiency and attainment enumerated under the first head. An industry or factory system is only beneficial, in the final analysis, to a given community to the same degree that its conditions of production tend to make for the general health, and that the products and wages are so distributed as to make a higher type of living possible for all. The problems resulting from misadjustment in industry and the present factory system, should be a basic part of a vocational study.

These problems are broad, diversified and oftentimes hard to isolate sufficiently for detailed study, but in the main they may be grouped under the following heads, namely: (1) characteristics of classes and class feeling resulting from industry; (2) mediating agencies between the classes; (3) dependent individuals and families due to the industrial system, and disintegration of the moral fibre due to industrial conditions; and (4) proposed remedies.

Classes and class feeling have been factors in civilization for countless generations, but modern methods of production have created classes of workers and a class consciousness quite different from previous industrial systems. With the acquirement of complete freedom under the later Guild system of Europe, the industrial class wrought out ideals and developed technique, skill, and craft standards. But with the industrial revolution the tools and machines of production became the property, not of the worker, but of the wealthier group of individuals. With this change of setting, class consciousness also evolved, and with it, elements of antagonism, jealousy, and oftentimes hatred, appeared. Trade unions became forceful and persistent weapons in the hands of the laborers against their employers. This class feeling, although necessary to uphold standards of living, wages and skill, has resulted in unifying the producers into a group called laborers, and the owners of machinery, and other means of production, into a group called capitalists. The ideals and

functions of trade unions, as well as the various alliances of capitalists and manufacturers, should certainly be included in a vocational study.

The disagreements and conflicts between the two classes have led to the necessity of mediating agencies, the enumeration of which is the purpose of the second topic. A detailed treatment of the topic would lead to a study of the German, French, and English methods of mediation and regulation, but in this outline such can only be suggested. It will suffice to call attention to some of the more important organizations.

There are general organizations, such as the American Federation of Labor, attempting to co-ordinate the activities of labor unions and to inform local labor organizations to what extent nation-wide labor interests will support their particular interests of laborers in a given community. The United States Department of Labor aims to gather statistics relative to all phases of industrial life. The special Wage Board, empowered by the government to set wage scales for railroad engineers employed in interstate business, should also be studied. The National Civic Federation exists solely for the purpose of mediation. Various state boards and commissions, such as the Massachusetts Minimum Wage Board, the New York State Department of Labor, etc., should also receive adequate study.

The next enumerated community problem is the regulation of hours of labor, accidents, and diseases and the care of dependents, resulting from injury. Recent legislation in many states shows the attention that this phase of the problem is receiving. Laws have been already enacted in most states limiting the hours of work to a reasonable number. In many fields of industry, however, the hours are still too long, especially where women and children are employed. This is notably true in canning industries throughout the country and in the textile industries in the South.

Another distinct community problem is to remove the causes that result in loss of health and life in industrial pursuits. In this connection, agencies and proposed methods aiming to correct present hazardous conditions should receive due consideration. Among these agencies are the Industrial Commission of New

York State which aims to gather data and recommend legislation, the Consumers' League, which seeks to educate the public relative to the conditions of production. Among the proposed plans for amelioration are: Industrial Insurance; Workers' Liability Acts; Acts aiming to regulate tenement house industries; Laws regulating factory construction; Laws requiring proper guards on machinery; Laws requiring proper ventilation and sanitation, etc. In short practically all attempts at social betterment are the outgrowth of these community problems.

Related Social Content

In a social study, the facts of the past must be drawn upon to interpret present conditions, hence in a vocational study aiming to interpret life activities, industrial history must be a component part. Without some of the basic facts of the origin and place of industry in primitive and mediæval life, of the great inventors and inventions, of the movements of peoples, and the peculiar industrial problems of past generations, the worker of to-day is far short of possessing his natural heritage. And too, this broader feeling of participation with the other factors aiming toward human betterment, can only be developed by tracing the industrial development of civilization through the ages, showing how each new invention or machine was a step toward removing tedious and wearying human toil, and making a higher type of living possible.

The history of the development of the steel industry in the United States is filled with dramatic interest, as one reads of the evolution of the little iron forge of old Taunton through the various stages of the industry to the modern steel plants of Pennsylvania, occupying acres of floor space filled with complicated machinery, and turning out products that have been made possible only by years of scientific study.

The history of the paper industry in the United States is also latent with material of dramatic interest, which, if made available for the rank and file of industrial workers, would lend a new coloring to their work. An incident from this field during the Colonial period will show the possibilities of this industrial history. Up to the time of the Revolution, machine methods

were unknown in the paper industry. The moulds, upon which the liquid pulp was poured, were imported from England and Holland. These moulds were made of very fine wire woven very closely. With the best care, a mould lasted but a very short time. When all the American ports were closed to foreign trade during the war, it was impossible to import moulds, so the paper makers were confronted with grave problems. In the Ivy Mills, the stock paper for printing Continental money had run out, the English-made paper moulds had worn out, and there was no wire in the country fine enough with which to reface them. There was but one man in the colonies, Nathan Sellers, who was known to be able to reface these moulds. He was in the army, serving under Colonel Paschall. The battalion had already left Philadelphia and was marching toward New Jersey. Accordingly, the paper makers sent a petition to Congress asking, "That Nathan Sellers may be ordered to return from service to make and prepare suitable moulds for carrying on the paper manufactory." This petition was presented to Congress on August 20, 1776, and passed favorably upon August 26, 1776. The order came as a great surprise to Sellers as he intended remaining in the army, but on August 29, 1776, he records in his diary the following, "Marched to Newark, Father and Sammy arrived with order of Congress for my return."

Sellers reached home on the first of September, and on the third he was busy brassing, or facing, and watermarking the moulds for the Wilcox Ivy Mills. The government decided it was best to own the moulds upon which paper money was to be made, so Sellers was hired to prepare these moulds, and we find him thus employed for the rest of his life.[16]

Industrial biography is equally important, and a study of the lives of some of the inventors as well as the common workers, will do much toward developing the larger conception of the real work and setting of industry.

Through history and biography it is possible also to develop a conception of the potential opportunities for service through industry. It is contended that this conception is sorely needed at the present time. On every hand, the general spirit is preva-

[16] Source Material, courtesy of Philadelphia Historical Society.

lent that the ideal toward which industrial workers are to aim, is to get out of industry as soon as possible. The public schools, rather unconsciously in some instances, develop an indifferent or even antagonistic attitude toward the common industrial occupations of the community. It might seem, that, as a people, we have reached the stage where we no longer consider it the function of our children to participate in the preparation of the common necessities of life.

We have imported workers unacquainted with our national ideals and traditions and have placed them in our factories, thereby creating problems that it will take generations to solve. It is for the school to implant a vision of service through industry, in the mind of every prospective worker, and not until this is done will there be much hope of a new era in industry in United States.

But with this new vision of service through work, the laborer would join in the prayer of the mediaeval printer as he prayed, "Oh Lord, Almighty God, Printing is a glorious and a noble art, a blessing thou hast reserved for mankind in these latter days; an art by which all conditions of men, and especially the Holy Church, are greatly nourished. And since, Good Lord, Thou hast of thy free Grace given unto me the opportunity of exercising an art and craft so exalted, I pray Thee to guide us by thy Holy Spirit in using the same to thy Honor. Thou knowest, dear Lord, that great diligence, continual care, and accurate knowledge of the characters of many Languages are needful in this art; therefore I call upon Thee for help that I may be earnest and careful both in the setting up and in printing the same. Preserve my soul in the constant love of the Holy Word and Truth, and my body in sobriety and purity; that so, after a life befitting a printer, I may hereafter, at the last coming of my worthy Savior, Jesus Christ, be found a good workman in His sight, and wear an everlasting crown in His Presence. Hear me, dearest God, for Thy Honor and my welfare. Amen."[17]

[17] Well Conducted Print Shop, by J. H. G. Erneste. Out of print.

HOW WORKERS IN NEW YORK CITY ARE DIVIDED IN OCCUPATION.

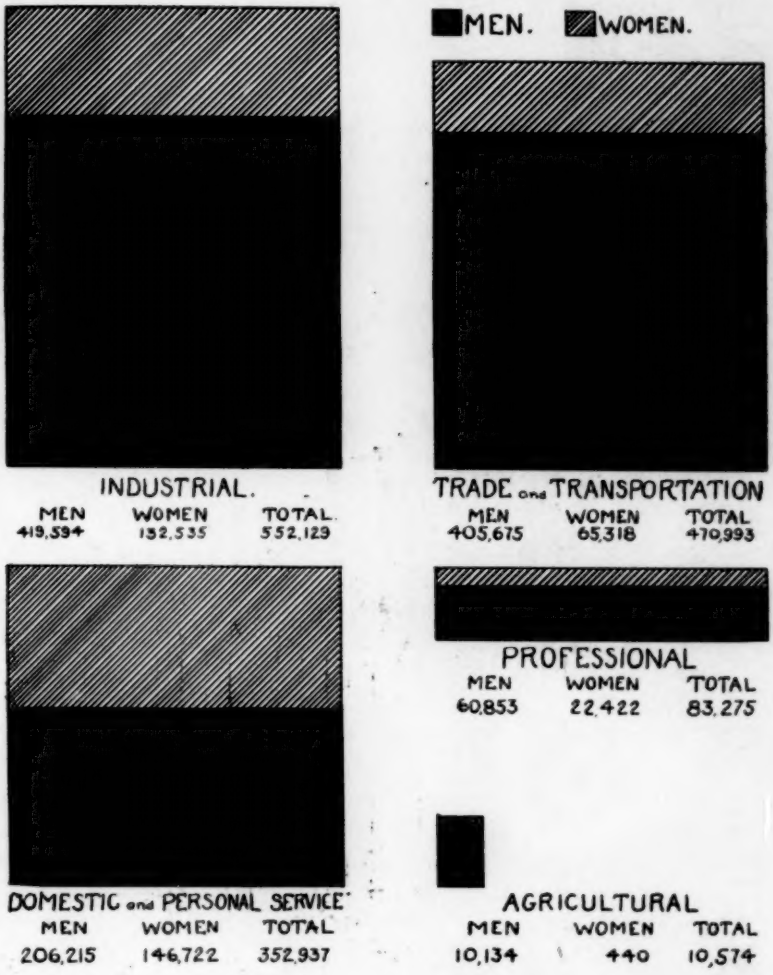
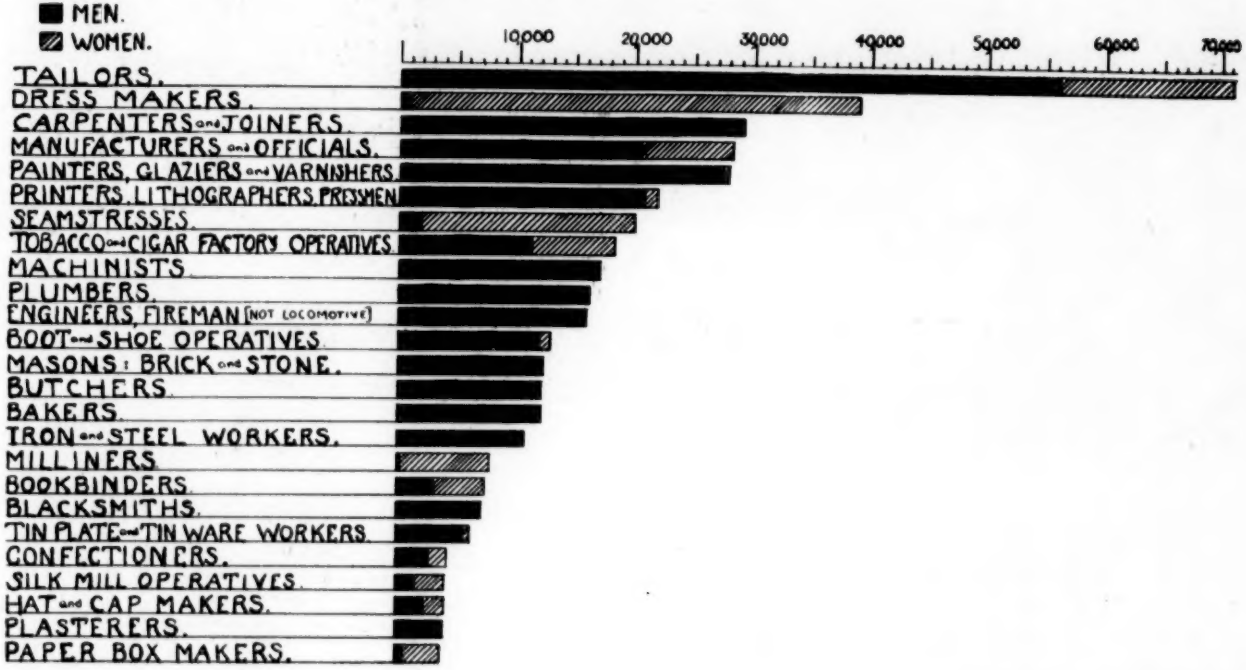


CHART I

UNIV. OF MICH.

DISTRIBUTION OF WORKERS IN INDUSTRIAL GROUP IN NEW YORK CITY.



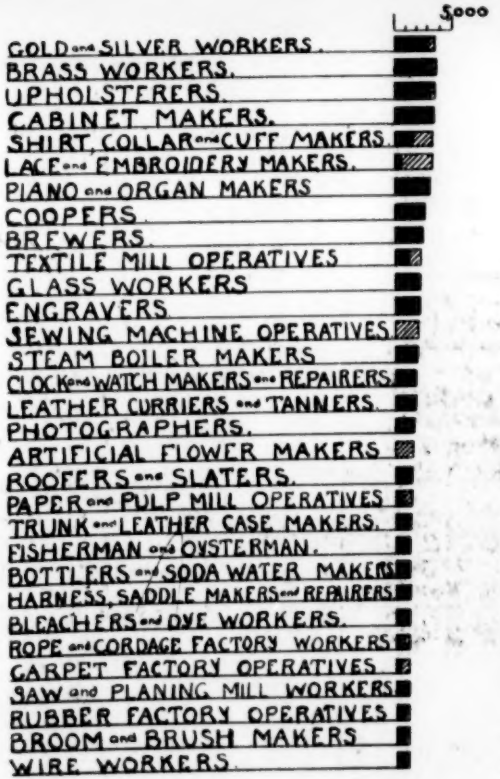


CHART 3

STATE OF IOWA

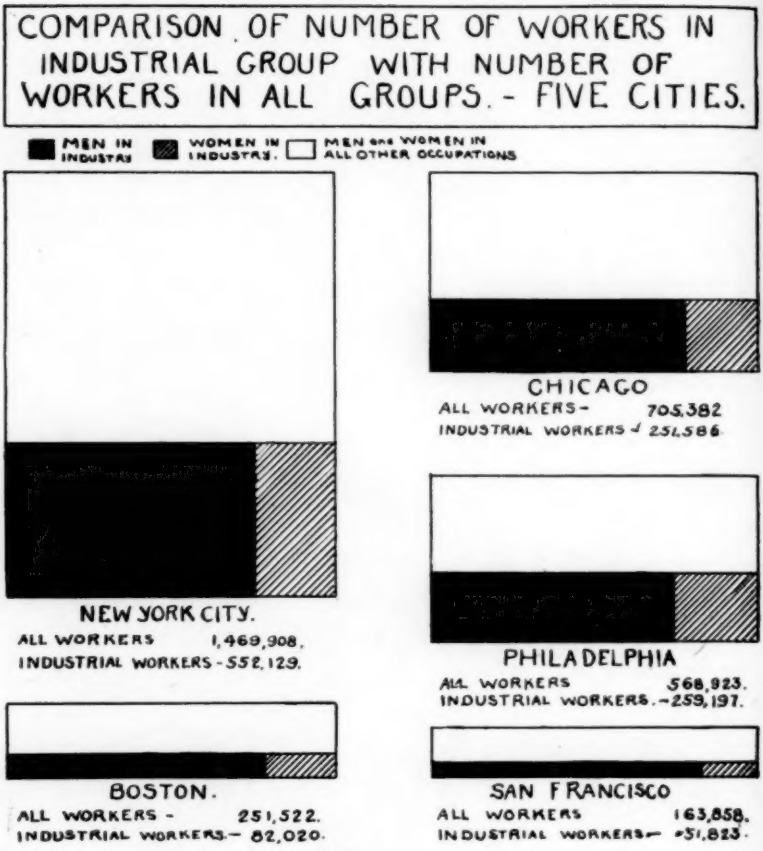

COMPARISON OF NUMBER OF WORKERS IN INDUSTRIAL GROUP WITH NUMBER OF WORKERS IN ALL GROUPS. - FIVE CITIES.
MEN IN INDUSTRY
WOMEN IN INDUSTRY.
MEN and WOMEN IN ALL OTHER OCCUPATIONS
NEW YORK CITY.
ALL WORKERS 1,469,908.
INDUSTRIAL WORKERS - 552,129.
CHICAGO
ALL WORKERS - 705,382
INDUSTRIAL WORKERS - 251,586
PHILADELPHIA
ALL WORKERS 568,923.
INDUSTRIAL WORKERS. - 259,197.
BOSTON.
ALL WORKERS - 251,522.
INDUSTRIAL WORKERS. - 82,020.
SAN FRANCISCO
ALL WORKERS 163,858.
INDUSTRIAL WORKERS - 51,823.

CHART 2

A Preliminary Occupational Study of New York City

The social study outlined in the preceding pages forms a basis for a more detailed occupational study in any given area. The accompanying charts show how this material may be successfully used in the class room. It is assumed that the material presented under this section is intended only as introductory occupational study. Much supplementary matter must be presented to give full meaning to the various topics.

Such information as contained in the charts should not be presented until pupils, through association and contact with community life, as well as through the medium of the school, have a general background of familiarity and acquaintance with these type occupations.

The first chart, how workers in New York City are divided in occupation, shows the relative number of workers in the five groups; industrial, trade and transportation, domestic and personal service, professional, and agricultural. The grouping used is that adopted by the Census and the figures for the first chart were obtained from Table 43 of the Special Report on Occupations of the United States Census, 1904.

Chart number two shows the relation of the entire number of workers in the community to the number of workers in industry. In the case of New York, according to the Special Report of 1904 of the United States Census, 37 per cent of the entire number of workers were to be found in industry. This per cent does not include the tenement industries, nor the home factories of various kinds, both of which play a very important part in the industrial life of New York City. The percentage in industry would be much larger if it included the home industries. The chart shows also the comparative number in industry, relative to the entire group in four other cities, and it is interesting to note that the comparative number in industry is quite constant in the various cities cited.

Chart number three shows the distribution of workers in the industrial group in New York City. The figures in this case also are based on the Special Report of 1904, United States

Census, and show that the industries employing the greatest number of workers are very inadequately considered in the general educative scheme of the city.

Such charts as are here shown should be a part of every public school equipment, for they bear the same relation to the understanding of human activities, as geographical maps do to the knowledge of physical features.

2

The Curriculum of the Horace Mann Elementary School

Arithmetic, Geography, History, Music

By

The Teachers of the Horace Mann Elementary School

Teachers College, Columbia University

PUBLISHED BY
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NEW YORK CITY
1913

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V. HISTORY		48
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TEACHERS OF THE HORACE MANN ELEMENTARY SCHOOL

1912-1913

Henry Carr Pearson	*Principal*
Clara Mabel Wheeler	*First Grade*
Florence Mabel McVey	*First Grade*
Evelyn Batchelder	*Second Grade*
Mildred Ione Batchelder	*Second Grade*
Alice Elizabeth Phelps	*Open Air Class*
Mary A. Oliver	*Open Air Class*
Myrtle Garrison	*Open Air Class*
Roxana A. Steele	*Third Grade*
Alice Thompson	*Third Grade*
Ida Elizabeth Robbins	*Fourth Grade*
Florence May Marshall	*Fourth Grade*
Elizabeth Cleasby	*Primary Grades*
Maud Vivian Keyes	*Fifth Grade*
Margaret Condry	*Fifth Grade*
Lura Parker Fitch	*Fifth Grade*
Mary Frederika Kirchwey	*Sixth Grade*
Mary Gertrude Peabody	*Sixth Grade*
Siegried Hansen Upton	*Sixth Grade*
Caroline Woodbridge Hotchkiss	*Seventh Grade*
Lillian Emily Rogers	*Seventh Grade*
Georgia Farrand Bacon	*Seventh Grade*
Kate Stuart Anthony	*Domestic Art*
Lucia Williams Dement	*Fine Arts*
Helen Latham	*Music*
Amy Logan	*Domestic Science*
Robert Josselyn Leonard	*Industrial Arts*
Lucy Hess Weiser	*Industrial Arts*
Marie Karcher Brooks	*French*
Laura Bishop Crandon	*German*
Mary Perle Anderson	*Nature Study*
Florence Mary Healy	*Physical Training*
Marie Louise Dowd	*Physical Training*
P. Joseph Kersey	*Physical Training*
Florence Stuart	*Physical Training*
Fay Williams	*Physical Training*
George Thomas Holm	*Swimming*
Gertrude T. Harris	*Grammar Assistant*
Gertrude Bigelow	*Primary Assistant*